Gleanings in Bee Culture

Established 1873

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November, 1939

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Subscription Rates—United States and Canada, one year, $1.00; two years for $1.50; three years for $2.00. Single copy, 10 cents. Other countries, 25c per year additional for postage. Discontinuance—Subscription stopped on expiration. No subscriber will be run into debt by us for this journal. Change of address—Give your old address as well as the new and write the name to which the journal has heretofore been addressed. Remittance should be sent by postoffice money order, bank draft, express money order or check. Contribution to Gleanings columns solicited; stamps should be enclosed to insure return to author of manuscript if not printed. Advertising Rates—Advertising rates and conditions will be sent on request. Results from advertising in this journal are remarkably satisfactory. Advertisers' Reliability—While the publishers do not guarantee advertisements in this journal, they use utmost diligence to establish in advance the reliability of every advertiser using space in this journal.

Entered as second class mail matter at the Postoffice at Medina, Ohio. Published monthly.

The A. I. Root Company, Publishers, Medina, Ohio

E. R. Root and M. J. Deyell, Editors; M. W. Hobart, Assistant Editor; H. H. Root, Associate Editor; D. C. Babcock, Circulation Manager.

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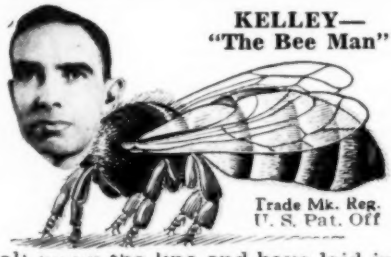

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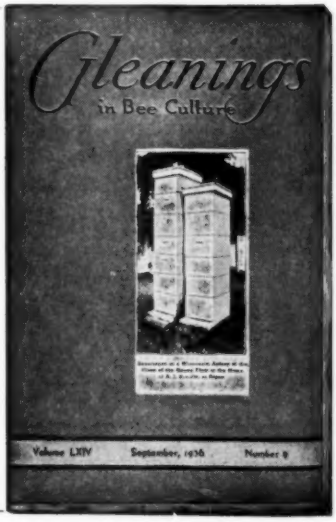

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF MARCH 3, 1933, OF GLEANINGS IN BEE CULTURE, PUBLISHED MONTHLY AT MEDINA, OHIO, FOR OCTOBER 1, 1939.

State of Ohio, County of Medina, ss.:

Before me, a Notary Public in and for the state and county aforesaid, personally appeared M. J. Deyell, who, having been duly sworn according to law, deposes and says that he is the Editor of Gleanings in Bee Culture, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

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Editors, E. R. Root and M. J. Deyell, Medina, Ohio.

Business Manager, M. J. Deyell, Medina, O.

2. That the owner is: (if owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

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5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is (This information is required from daily publications only.)

M. J. DEYELL, Editor.

Sworn to and subscribed before me this 3rd day of October, 1939.

HAROLD C. WEST, Notary Public.
(My commission expires Mar. 27, 1940.)

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The Monthly Honey Market

U. S. GOVERNMENT REPORT

Information from Producing Areas (last half of September).

California Points: Southern California—Weather conditions have varied widely. Early in the period it was clear and hot, with temperatures ranging much above normal. Toward the close a heavy wind and rain storm occurred, with total rainfall amounting to more than 5 inches in most localities, following which temperatures declined to normal. The rain may lessen the anticipated yields from blue curl and mullein. The condition of bees varies widely. In many yards considerable feeding will be necessary if bees are to survive, and as sugar is scarce and high beekeepers fear that many colonies may starve. The market for honey has strengthened substantially on all grades, and many beekeepers are declining to sell at present prices. Trading, therefore, has been moderate to light. Sales by beekeepers in ton lots or more at Southern California delivery points reported, per lb.; Orange, Extra White 6¼-6½c, White 5½-6c; Sage-Buckwheat, Extra Light Amber $5.80-6.00 per case of 120 lbs., some $6.15; Light Amber $5.60-5.75 per case; Light Amber to Extra Light Amber Alfalfa $5.40-5.50 per case of 120 lbs. Beeswax has been stronger with offerings light. Prevailing prices have ranged 18-20c, mostly 18-19c per lb. delivered Los Angeles.

Imperial Valley—Bees are still gathering pollen from fall weeds and have plenty of stores for winter. The market has recently been active and advancing. Several large lots of Light Amber to Extra Light Amber Alfalfa have moved at $4.75-5.25 per case of 120 lbs. f.o.b. shipping point; other sales delivered Los Angeles $5.70 per case. One large lot reported optioned to San Francisco at $7.20 per case—for 30-day option.

Central California—Temperatures were excessively high until the last week of the month, when general rains broke the heat wave. Previously scattered light showers and thunderstorms had occurred. Considerable crop damage reported as a result of the hot weather. Bees in the San Joaquin Valley are still working lightly on cotton, spikeweed, blue curl, alfalfa, turkey mullein and jack clover, but little nectar is being gathered. Most colonies, however, seem to be in normal condition for the season. The market has been quiet. Most dealers have sufficient supplies for the present and are not interested in buying at prevailing market levels, which are slightly higher. Most beekeepers are holding for higher prices. Few sales by beekeepers, in ton lots or more, at Central California delivery points—Light Amber to Extra Light Amber Alfalfa-Bean-Cotton 3½-4c, some 4¼c per lb.; Light Amber to Amber Mixed Flowers 3¼-3½c per lb. Sales delivered Los Angeles, San Joaquin Valley Extra Light Amber to White Bean 4¾c; Light Amber to Extra Light Amber Alfalfa $5.40 per case of 120 lbs.; Light Amber to Extra Light Amber Cotton-Alfalfa $4.50-4.65 per case.

Northern California—An extended period of warm weather has been reported, with scattered rains toward the close of the period. Bees are gathering a little nectar from star thistle, Ladino clover, and alfalfa, but only enough for current needs. Most colonies are in fair condition and have sufficient pollen. Brood-rearing has slackened and in some hives the honey supply is rather light. The market has been quiet, with beekeepers holding for prices above current quotations and selling slowly. The market trend appears to be slightly upward. Sales by beekeepers in ton lots or more at Northern California delivery points—Extra Light Amber to White Thistle 4¼-4½c; Amber to Light Amber Mixed Flowers 3¼-3½c per lb. Sales delivered Los Angeles, Extra Light Amber to White Thistle 5¼c.

The beeswax market has strengthened, with eastern dealers reported showing more interest in western wax. Trading has been light, with limited supplies received by the larger buyers. Current market prices range 18-20c per lb. for good yellow wax at Northern and Central California delivery points.

Pacific Northwest: West of Cascades—Temperatures have averaged above normal, and this has lessened the gathering of nectar in some sections. Bees are working on western dandelion and a few other late plants, but are gathering little except pollen. Bees and honey plants are generally in average condition, with a fair supply of honey and pollen for winter needs. The yield of Fireweed honey is reported short, with reports from various beekeepers ranging from 10 to 69 lbs. average to the colony. The colonies with the best yields were in the higher elevations, and in those areas some of the Fireweed taken off was White to Water White in color. Most Fireweed honey is darker in color than in former years, though the body and flavor are reported good. In some areas beekeepers report that there is too much honeydew in the broodnests for good wintering. And in some of the higher elevations broodnests contain honey from the Pearly Everlasting, which is said to have too much acid and gum for good wintering. E. L. A. to White Fireweed sold at 5½c lb. f.o.b. Willamette Valley. Clover-Vetch 4½c.

East of Cascades—Temperatures have been much above normal and the weather has been favorable for bees oo fly, but pasturage is restricted. Strong colonies bring in a little surplus from late sweet clover, asters, alfalfa, goldenrod, and rabbit brush, but most of the nectar goes into the brood chambers. Stores are generally ample, but brood is reported light in some yards. Some yards show the effect of spray poisoning. Demand for honey reported fair, with a marked tendency upward to the market. Sales of Sweet clover-Alfalfa reported at 5c per lb. delivered Seattle or Portland.

Intermountain Region—Extracting is now over but beekeepers are in many cases making little effort to dispose of their honey rapidly, hoping that the honey market may advance as the season progresses. Even local sales have been restricted, due in part to the exceptionally warm fall weather. Price ranges so far this season have been wider than usual. Occasional cars of Extra Light Amber to White Sweet clover-Alfalfa have moved at 4½-5c per lb. and most ton lots have sold at the same range, with few bringing 6c per lb.; Extra White to Water White, ton lots 5-5½c, few up to 6c per lb.; 60s White 6-6⅔c per lb., small pails 6-8½c, Light Amber 3½-4c. Large lots No. 1 White wrapped comb $3.25-3.80, some unwrapped $2.75; Choice wrapped $2.00 per case. Shallow frame bulk honey 8-8½c per lb., small pails bulk comb 8-9c per lb. Beeswax, 14-16c, few 13c per lb. cash, 17-18c in trade.

SUMMARY—Temperatures during this period have been generally substantially above normal, making new records in Southern California and in portions of the Plains States. Toward the close temperatures dropped, especially in the North Central portion of the country and on the West Coast. Rains were locally heavy in Southern California and portions of the Southeast. The drouth in the New York area and portions of the Plains States has

been partially relieved, but severe drouth conditions still prevail over large areas of the Midwest. The condition of nectar-bearing plants is problematical over a wide area because of the effect of drouth and hot weather on both old plants and new seedings. Unfavorable weather curtailed the fall flow in many sections and beekeepers may find that fall feeding will be more widely needed than had been thought necessary. Losses of bees from grasshopper poison bait have been heavy in Utah and other States, and from spray poisoning in the Northwest. Some beekeepers fear that more colonies than usual may die over winter because of the shortage and high price of sugar for feed in cases where winter stores are inadequate. Supplies of pollen, however, seem to be at least fully up to normal. The quality of this year's main crop appears to have varied more widely than in many previous years. The thin honey reported early in the season seems to have been largely sold and honey extracted later was often whiter and of heavier body than that extracted earlier.

The market situation also shows a wide lack of uniformity in different parts of the country. 1938 crop honey is now about out of the picture so far as beekeepers are concerned but packers are still working on late purchases of old crop honey. New crop honey is selling better on the whole and at increased price levels. Many large buyers, however, are still purchasing at previous prices and have bought much honey at those levels. Even in the same State, price ranges are wide for carlot quantities of honey of about the same quality. Comb honey is extremely scarce already. Most beekeepers prefer to hold their honey in the hope that because of the short crop as well as conditions resulting from the war situation prices may advance further as the season progresses.

Reports from abroad indicate that exportation of honey will be restricted. The British Board of Trade has issued an order prohibiting the importation of certain "luxury foods", including honey, without a separate license for each transaction. Great Britain has notified the neutral countries that it considers food products contraband of war. Italian importers, it is reported, are unable to secure import licenses for honey from their government. With the former foreign demand for honey curtailed it behooves beekeepers to give even more attention than usual to the development and stimulation of the domestic demand.

Monthly Report of Honey Producers

Early in October we sent the following questions to honey producers: 1. What is the final average yield per colony to date this season in your locality of (a) extracted honey? (b) comb honey? Give answer in pounds. 2. How does this compare with the average yield for your locality? Give answer in per cent. 3. At what price has honey been sold or contracted for, if any, in large lots (carload or less) in your locality, during the past month, for (a) extracted honey, per pound? (b) comb honey, fancy and No. 1, per case? 4. What are prices when sold to grocers in case lots of (a) extracted honey in 5 lb. pails, or other retail packages in terms of 5 lb. pails? (b) comb honey, fancy and No. 1, per case? 5. What is the retail price to consumers in your locality for (a) extracted honey in 5 lb. pails, or other retail packages in terms of 5 lb. pails? (b) Comb honey, fancy and No. 1, per section? 6. How is honey now moving on the market in your locality? Give answer in one word, as slow, fair or rapid. 7. What is the condition of the colonies for winter in your locality compared with normal considering the number and age of bees and the supply of stores? Give answer in per cent.

State. Name.	Aver. yield. Ex.	Comb.	Comparison.	Carload lots Ex.	Comb.	To grocers. Ex.	Comb.	To consumers. Ex.	Comb.	Movement.	Cond. of colo.
S-Ala. (J. C. Dickman)	50		100			.40		.50		Slow	100
B. C. (A. W. Finlay)	40		60	.09		.65		.85		Fair	80
S-Calif. (L. L. Andrews)	30		40	.05½				.52	.27	Fair	90
SE-Colo. (O. E. Adcock)	12	0	75	.05			3.75	.55	.20	Slow	100
S-Fla. (C. C. Cook)	70	0	100	.04		.35		.50		Slow	100
C-Fla. (Harry Hewitt)	80		130	.04		.33		.49		Slow	100
SE-Ga. (J. J. Wilder)	80	65	85	.05½		.50		.65		Slow	100
NC-Ills. (A. L. Kildow)	50	0	60	.05		.50		.50		Fair	100
S-Ills. (Carl E. Killion)	40	30	25	.07	3.00	.43	3.60	.59	.19	Fair	75
NC-Ind. (T. C. Johnson)	40	25	30			.50	3.00	.60	.15	Slow	75
NW-Ind. (E. S. Miller)	60	40	90			.50	3.00	.65	.15	Fair	90
W-Iowa (W. G. Brown)	200		130							Rapid	110
N-Maine (O. B. Griffin)	0	25	60				4.90		.28	Fair	110
S-Mich. (Floyd Markham)	120		100	.05½	2.75	.50	3.25	.75	.20	Rapid	100
C-Mich. E. D. Townsend)			110	.05¾						Fair	100
E-Minn. (Floyd W. Ray)	100		75	.04¾	3.00	.40	3.50	.49	.18	Fair	100
W-Minn. (B. L. Morehouse)	130	80	115	.05		.45	3.25	.60	.20	Fair	100
C-Nebr. (J. H. Wagner)	125	50	100	.06	3.00	.40	3.60	.45	.20	Slow	100
W-Nev. (Geo. G. Schweis)	60	20	50	.04¾	3.25		3.25	.40	.20	Fair	75
W-N. Y. (Adams & Myers)	75					.45	4.00	.65	.20	Fair	100
NW-N. Y. (Geo. B. Howe)	40		40	.06	3.50	.50	3.60	.60	.25	Slow	100
C-N. Y. (F. W. Lesser)	40	10	50	.06½	3.50	.48	4.00	.60	.20	Rapid	90
C-N. Y. (N. L. Stevens)	40		50	.06				.60	.15	Fair	100
SE-N. C. (W. J. Martin)	50	30	90	.06		.60		.80	.20	Fair	100
E-N. D. (M. W. Cousineau)	75	0	50	.05¼				.49	.20	Good	50
C-Ohio (R. D. Hiatt)	70	35	45			.47	3.50	.65	.19	Fair	90
NC-Okla. (C. F. Stiles)	30	0	80			.45		.63	.18	Fair	80
W-Ore. (H. A. Scullen)	80		100			.40		.49	.17	Fair	100
C-Pa. (Harry Beaver)	45	0	50	.06		.50		.65		Rapid	80
SE-Pa. (D. C. Gilham)	10	0	15	.06½		.70	4.00	1.00	.25	Slow	80
W-S. C. (E. S. Prevost)	30	25	110			.75		.95		Fair	80
SE-S. D. (J. F. Norgren)	100	75	110	.05		.43		.55	.15	Fair	100
C-Tenn. (J. M. Buchanan)	50	25	75					.75	.20	Fair	90
E-Tenn. (W. L. Walling)	30	0	75			.75		1.00		Fair	100
C-Texas (T. A. Bowden)	50		115			.45		.55		Fair	100
S-Texas (J. N. Mayes)	5		5	.05		.20				Slow	10
S-Texas (H. B. Parks)	46		90			.47		.55		Fair	90
S-Va. (L. N. Gravely)								.47		Rapid	80
SC-Wash. (Chas. Higgins)	60		60	.06							
SE-Wisc. (N. E. France)	55	25	50	.05				.55	.14	Fair	57
N-Wyo. (Earl C. Reed)	50	30	50			.45		.55		Fair	90

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5 lb. Pails, per carton of 50	3.00
10 lb. Pails, per case of 6	.78
10 lb. Pails, per carton of 50	4.60
60 lb. Cans, in bulk, each	.30
60 lb. Cans, per case of 2	.92
60 lb. Cans, per carton of 24	6.96

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Vol. 67
No. 11

Gleanings in Bee Culture

November
1939

Cellar Wintering

Chas. S. Hofmann

One Method of Wintering Bees in the North

Hives well arranged in the cellar.

[The writer of this article is a successful commercial honey producer with approximately 1000 colonies.—Editor.]

During the last few years the trend of wintering in many localities has been toward outdoor packing. But this is no doubt due more to unreliable plant conditions, drouth, and migratory methods than it is to any demerits of the cellar method. The development of better roads and trucks has made it not only possible but practical for beekeepers to change locations from year to year, making it unwise to invest money in a bee cellar.

Cellars do make excellent wintering quarters for bees. The cost of construction need not be high. The important thing in building a cellar is to adhere carefully to the basic principals of wintering and let the type of construction fit one's pocketbook. Over a period of years in wintering bees in a great many types, sizes, and shapes of cellars—some of them temporary makeshifts constructed under buildings never intended for the purpose—experience has proven beyond a doubt that there are certain rules that must not be violated.

Construction of Cellar

In a territory where the ground is very flat it would probably be difficult to construct a cellar because of the drainage problem, but a great amount of slope is not needed. A cellar must be far enough underground so that an even temperature can be maintained, which would place the ceiling at least slightly below the ground level. In other words, the cellar proper would be entirely underground. If a suitable hillside is not available then the dirt from the excavation, with perhaps a little extra added and banked on the side will do the job in fine shape.

The roof must, of course, shed water and that portion of the wall that is above ground must do likewise. Galvanized iron over a skeleton of 2 x 4's works very well. The foundation or cellar wall may be of hollow tile, concrete, rock, dirt (if the subsoil is clay or some type that will not crumble or cave readily), or dirt boarded to prevent caving. The floor may be dirt or concrete. The very best ceiling for any cellar is woven wire stretched over a framework, over which is placed about two feet of straw. The concrete, rock, or tile wall construction is, of course, the more permanent and will help avoid the possibility of trouble from rats or mice.

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Conditions Within Cellar

Assuming that we have a number of good average colonies to winter (average as to age of bees, queen, and quality of stores, etc.) these bees in order to winter properly in a cellar must have four things: (1) air, (2) proper temperature, (3) darkness, and (4) proper humidity.

Air in a cellar serves a two-fold purpose, to help control the temperature and to supply oxygen to the bees. All the good derived from having the proper amount of good air in a cellar is offset if this air causes a draft and serious fluctuations in the temperature. This problem can be solved a number of ways but one method that will prove very satisfactory is underground ventilation, i.e., air brought into the cellar by gravity through an underground tile line. The advantages of this method are that air coming into a cellar through 80 to 100 feet of underground tile line does not cause a draft and is tempered somewhat by the ground and will not affect the cellar temperature so quickly.

In the spring when the temperature outside may rise suddenly for a day or two the cool ground will help keep down the cellar temperature.

The tile if properly laid with at least a gentle slope will act as a natural drain for the cellar in case of water seepage. The mouth of the tile, however, should always be protected by iron stakes because those black and white animals with the funny smell just love tile lines and will cause no end of trouble if allowed to enter the line. Also, if the tile opening is at the back of the cellar instead of the front the "tempering" qualities are improved simply because the cellar floor doesn't freeze.

Ventilation

The air can best be taken out of the cellar through an opening in the straw ceiling. A box about four feet square without top or bottom and resting on the woven wire will do as well as anything. This upper ventilator should be about two-thirds the length of the cellar away from the tile inlet to insure an even distribution of air. During cold weather this outlet can be closed with several thicknesses of burlap laid over the woven wire. The air will then come in through the tile only as fast as it can seep up through the straw ceiling. This will provide a gentle change of air even during very cold weather, and if the cold is long continued no harm is done by closing the tile line also.

There is an old adage that a chain is no stronger than its weakest link. A cellar is no better than it's ability to treat the bees right during the last two or three weeks of wintering. It is then that the real test of ventilation and drainage is apparent. When the outside temperature is near zero and it is 40° in the cellar this difference in temperature will make the air move rapidly. During a sudden warm spell the outside temperature is near that of the cellar and the air naturally moves very slowly. A large air inlet would at this point more than prove it's worth, because if a good volume of fresh air can be kept moving through a cellar a rise in the cellar temperature will have less effect on the bees.

The vestibule of this outyard cellar is visible. The entrance is on a level with the ground—no steps or ramp to make carrying difficult.

The home cellar is 20 x 70 feet, with a partition making two parts—one 20 x 30, and one 20 x 40 feet. It has a vestibule for double doors, also a grade entrance level with the ground. A 24-inch tile supplies all the air.

One of the best methods of testing for proper air conditions is with a light, one not too bright, an old kerosene lantern if you have one. If the bees respond to a light by breaking away from the cluster and flying at the light, then the air is not good, but if they merely respond with a slight increase in "hum" and are otherwise indifferent, the conditions are near ideal. This doesn't seem to have as much to do with temperature as might be supposed. I have seen a cellar with the temperature as high as 60° but with the bees quiet and easy to handle in the process of taking them out of the cellar, while, on the other hand, in another cellar with the temperature at 45° the bees were "wild".

As to tile size, I believe the minimum should be twelve inches in diameter. A twelve-inch tile will carry two and one quarter times as much air as will an eighth inch, and will supply air to a cellar large enough for about 100 colonies, but if the cellar is larger and more bees are to be wintered the tile should be correspondingly larger.

Proper Size and Temperature of Cellar

The capacity of a cellar can no doubt be best determined in terms of cubic feet, allowing about 25 to 30 cubic feet per colony. Thus a cellar 15 feet by 30 feet and with a 6½ foot ceiling will winter 100 to 125 strong colonies or their equivalent. An all-dirt cellar will sometimes allow a greater capacity than will concrete or some other material, due supposedly to peculiar soil conditions. Some years ago we repeatedly wintered very successfully about 85 colonies in an old cellar that was 15'x-15' with a 7 foot ceiling. This allowed only about 15 cubic feet per colony. However, that was more or less of an exception and it is always better to have a good margin of safety.

The proper temperature for a bee cellar has long been a point of controversy. The old recommendations of 45° to 50° were surely based on the wrong assumption. Lower temperatures are more conducive to good wintering. We have experimented somewhat with cellar temperatures but these experiments are necessarily very crude and of little scientific value. However, it has always seemed that about 38° F., or a range between 36° and 42° was more or less ideal. If the temperature hovers around the freezing point there seems to be more of a tendency toward condensation which is always undesirable. But if the temperature drops still lower, to, say, 20° F. conditions improve. This is perhaps a little extreme but we have maintained approximately that temperature in cellars from one to almost two months with apparently no ill effects to the bees. The first injury or bad effect would probably come in the form of starvation to some of the weaker colonies that would be unable to bring honey into the cluster or to break cluster enough to move onto new stores.

Temperature in a cellar and its effect on the bees is governed to quite an extent by the humidity of the air. If there is proper ventilation little thought need be given this because the air moving through the cellar acts as a fine humidity balancer. If certain conditions do cause excessive dampness and it appears to affect the bees it can be remedied to a large extent by sprinkling lime on the floor. Under-stocking a cellar will bring more trouble from dampness, due to the fact that the ventilators have to be kept closed more to maintain the desired temperature, resulting in somewhat stagnant air that may become clammy. This condition might also rob the bees of the proper amount of oxygen which will naturally do no good.

Putting Bees in the Cellar

Our usual practice here is to place the bees in winter quarters about Thanksgiving time or a little before. That is about the border line between fall and winter and regardless of flight conditions it is the time when Jack Frost can make sudden descents. The bees are placed in rows along the walls and down through the center of the floor and are kept off the floor about a foot by placing them on covers or racks of

(Continued on page 720)

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Wintering

E. R. Root

"What's the Use of Knowing so Much, When so Much You Know Ain't So?"

[The following is the first chapter of the entirely new article on Wintering for the 1940 edition of the A B C and X Y Z of Bee Culture to be issued soon. No doubt to some of the conservatives, the new orthodoxy will seem radical, if not wrong. The new teaching on this important subject is based on the latest work of the U. S. Bee Culture Laboratories as well as on the experience of some of the most successful beekeepers in the country. Our own apiaries (1200 colonies), covering a period of ten years, show not only the folly of excessive hive insulation but the importance of placing strong emphasis on better colonies in two-story hives the year around with an abundance of natural stores, including pollen. On page 575 of the new edition we prove that brood rearing in mid-winter is a normal and necessary condition for good wintering.—Ed.]

In the good old days, bees were wintered in single-story colonies and the clusters were relatively small as compared with those in the two-story hives of today. The wise men of that time (in the early 70s) said that we must abandon the methods of the box hive; had too many leak holes; that we must **take away all the honey, and give bees sugar syrup or stores containing no pollen.** By the same token we might as well say to the human mother, "Don't give your babies natural food, but give them man-made concoctions." To take away all natural honey and all pollen from the bees we now know was arrant nonsense. Baby bees as well as human babies should have as near natural food as can be given them. The science of medicine and of dietetics has proven this over and over again. Opinions backed by science and experience of late years show that a colony of bees, when it goes into winter quarters, should have well ripened, good quality honey, and a large amount of pollen.

Some of the Early Heresies

Out of the nonsense of the olden days, there was evolved the pollen theory, viz., take away all pollen because it was believed to be the cause of dysentery. Honey, it was urged, contains pollen and should not be used. Therefore, it was argued, take away **all honey** and **pollen** both, and feed straight sugar syrup.

In late years the pollen theory has been exploded, and likewise the feeding of **all** sugar syrup, which is now fed only when colonies are short of stores and natural stores are not available. Sugar stores contain no mineral matter and they are otherwise deficient in the necessary food elements we find in honey.

Another heresy that scarcely gained a foothold, was that bees could be wintered like ants, because forsooth, they were hibernating insects or animals, and should be kept in cold storage where they would go into a long, deep sleep from which they would revive when warm weather came on, and eat honey or sugar syrup. It seems almost silly to refer to such a piece of nonsense as this, but it gained considerable currency. However, the theory of hibernation for bees exploded almost as soon as it was advanced.

In this connection it may be explained that bees can remain in a chilled condition, when they appear to be almost lifeless, and as long as there is any honey left in the honey sacs, those bees will continue to live. However, within a week or ten days, when the food supply within their bodies is exhausted, those bees will starve to death, and not die of cold. Careful scientific work has so thoroughly proven this that it will never be in the class with the "ain't so's".

Excessive Winter Packing

Again, fifty or sixty years ago, as the early editions of this work will attest, it was believed that bees should be more warmly housed, so that they would be better able to withstand the sudden changes of temperature, from zero and below to 40, 50, or even blood temperature, above. While the theory of warm housing has a large element of truth in it, it can be overdone. Too much packing, except for extremely cold localities, where near zero and below weather generally prevails, is a mistake. Moderate packing, if kept dry, as will be shown later, gives very much better results in wintering, where the climate is not too cold, because the sun, during midwinter, can penetrate the packing, warming the cluster so that it can

move over to fresh stores. Too much packing establishes an ice house condition so that the cluster is either unable or is loathe to move, and when warm flight days come or warm spring weather, the bees continue to stay in their ice house surroundings and many starve because they cannot reach fresh stores. Good orthodoxy today calls for either little or no packing or a moderate amount or an amount based on the average temperature.

Moisture the Foe of Good Wintering

In the olden days little or no attention was paid to the question of moisture. A colony well housed, with only a bottom entrance, will accumulate a large amount of moisture. This moisture may escape into the packing around the sides and on top. When extremely cold weather comes on it freezes and the frozen packing on top and around the bees is worse than useless. It was thought to be good practice to let the moisture escape into the packing above where it would freeze but later schools of thought held that the covers should be sealed down so that the moisture could not get into the packing, thus keeping it dry. This was nearer the truth, but the result was that the moisture accumulated and ran down the sides of the hive, over the bees in drops. Worse yet, excessive moisture in the wintering space causes the honey to be diluted, bringing on dysentery.

Excessive moisture in the cellar is equally bad. It dilutes the stores of the bees, and dampness plus cold is very hard on the bees as shown by repeated experience. It was once believed that 45° F. was the right point for a bee cellar. Scientific research work has shown that the temperature of a bee cellar is dependent upon the question of moisture. If the cellar is perfectly dry and is located in a dry country, a temperature as low as 38° to 40° is permissible. If the atmosphere of the surrounding country is moist, running all the way from above freezing to a little below, a temperature of 43° to 45° in the cellar is better.

Here again, in the good old days, we were nearly right but just enough wrong to cause disastrous wintering in numerous cases, and we didn't know why. In those days it was believed that bees confined in a cellar should have a normal entrance, one inch deep by the full width of the hive. We now know that the size of the entrance should depend upon the temperature and the amount of moisture.

Top Entrances Not a Menace to Good Wintering

In the olden days it was proven, or thought to be definitely proven, that top entrances, affording extra ventilation, were a mistake. It was argued, why let the warm air at the top of the cluster escape, when it was so much needed by the bees. Here again the entrances or openings in the top of the hives were made too large, with the result that all the heat the cluster could develop was dissipated by escaping through the top. We know now that success lies in moderation of the size of the entrances. If moisture is a deadly enemy of bees in winter quarters, either in a cellar or outdoors, then a top entrance of ⅝ to 1 inch in diameter, three or four inches from the top of the hive, will allow this moisture to escape. Bees that were wintered with a fair degree of success, with occasional heavy losses, without top entrances, died, with wet and frozen packing. Now it is believed that bees in moderate climates, south of the Great Lakes with plenty of windbreaks, can often winter without packing during an average winter, provided there are top entrances no larger than ⅝ of an inch in diameter, with bottom entrances 1½ inches wide by ¼ of an inch deep.

To illustrate: from 1878 to the early eighties, the original author of this work, A. I. Root, believed in heavy packing. He built a double-walled hive with ten inches of packing on top, four inches on the sides and ends and four inches on the bottom. One could lift the ten-inch cushion in the winter and feel that there was a warm cluster beneath, but he noticed that the packing material, in the form of a chaff cushion became damp and finally almost wet. The result was that some winters Mr. Root lost very heavily. This was before the days of package bees. He finally discovered that some old box hive beekeepers, while he was losing heavily in the modern (?) way of doing things, would have strong colonies of black bees in box hives. So for a number of winters, the original author bought these black bees in all sorts of nondescript hives, with knot holes and leaks around the cov-

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ers, and transferred them to his modern hives. It did not occur to him at the time, nor to the present author, E. R. Root, that these old box hives, single-walled, with covers warped and gaps in the sides of the hives possessed one essential quality of good wintering, a fact which had been overlooked by all the advocates of excessive packing. For years and years A. I. Root made up his winter losses by buying black bees in these old box hives, until finally it dawned upon him and his son, E. R. Root, that they should get rid of the moisture. In spite of knowing so much we had winter losses. Our over-packed colonies, too much attention to temperature, too much moisture, lack of ventilation and lack of pollen were prime factors for our poor showing.

On this point we cannot do better than to quote from Bulletin No. 75 for February, 1927, by Prof. H. F. Wilson and Dr. V. G. Milum, of the University of Wisconsin. On page 33 of the above named bulletin we quote:

> On the basis of our observations and experiments, we have come to the conclusion that the matter of winter protection is far less important than the condition of the colonies and their winter stores.

From page 34 of the same bulletin we quote this:

> From the standpoint of protection afforded by winter packing cases in the spring, our observations and experiments tend to show that if hives are protected from prevailing winds by building windbreaks, those without insulation seem to do as well as those in packing cases. If there are any differences, they really appear to be in favor of those colonies which are not packed. The colonies which we have had under observation in our experiments, show that colonies without insulation may do as well or better during the spring brood rearing period and in the securing of a crop of honey than those in the packing cases.

Again, Dr. C. L. Corkins, a careful student and scientist at the University of Wyoming, in the American Bee Journal for October, 1932, page 400, says this:

> Even in cold climates, however, many successful beekeepers have not practiced packing. Others have used less packing than recommended, and none of them have found that heavy, expensive packing justifies the labor and expense. If the old theory is correct, it is hard to see how these beekeepers stay in business. Prevalent stories among beekeepers of bees in hives with open cracks and exposure coming through in good condition, and experience of a similar nature on our part, led to the four years of experiment on the wintering of bees.

Once more Jas. I. Hambleton, head of the U. S. Bee Culture Laboratories where research problems are worked out, writes:

> I feel, for instance, that in view of all the work that has been done on temperature, winter losses have not been reduced noticeably and that the key to the wintering problem will involve factors of greater importance than the reactions of bees to temperature. The great fault with present recommendations for packing bees is that temperature regulation is emphasized to the detriment of other factors that may be of more importance.

Box Hive Philosophy of Wintering

The old orthodoxy of wintering allowed the moisture to escape into the packing above. Or, if the cover was sealed down with bee glue, the moisture condensed in drops over the top and sides of the hive body. The new orthodoxy allows this moisture to escape through top entrances, at or near the top of the brood nest. Air ladened with moisture is lighter than the same air without moisture at the same given temperature. It follows that moist air will rise and if it can not escape through a top entrance will leave the broodnest or packing wet, and worse yet, dilute the stores and cause dysentery.

The Orthodoxy of Wintering of Today (1939)

The author, at this point, is frank to admit that we can go to the other extreme, as will be explained further on; but the evidence from many sources is in favor of a moderate amount of packing in cold climates, with a top entrance to let moisture escape three or four inches down from the top, with a bottom entrance, ¼ of an inch deep by 1½ inches wide, so that the bees can carry out their dead and leave no mouldy dead bees on the bottom boards. But, the important thing to observe is that the covers should be sealed down hermetically, so that **the packing when used shall be dry.** This, however, is not enough. There should be a young queen of vigorous stock, a two-story colony that will cluster between the upper and lower sets of frames, with fifty or sixty pounds of natural stores and pollen above. In addition there should be windbreaks on all sides.

This, in brief, is the orthodoxy toward which the beekeeping world now seems to be moving. But in view of past history, it behooves the new school of orthodoxy not to go too far either way. The safe and sane way is in this, as in other things, to take the middle road, until science and practice have proven, on a small scale, which is the right road to take for one's locality. Locality has much to do for successful wintering.

The Okefenokee Swamp

Chas. H. Huey

It Has Wonderful Beekeeping Possibilities, but---

In my explorations of the Okefenokee Swamp I have tried to see it from a beekeeper's point of view, that is, facts, figures, possibilities.

Many articles, even volumes, have been written about the flora, the wild life, and the romance of this great wonderland, but after all a sincere beekeeper would look at it from the point of dollars and cents.

Situated in Southeastern Georgia along the Florida border the Okefenokee Swamp covers from 600 to 700 square miles, is 60 miles long and from 18 to 30 miles wide; total area 500,000 to 700,000 acres; lies principally in three counties: Charlton, Ware and Clinch. (History of the Okefenokee Swamp, McQueen and Migell.)

It is higher than the level of the surrounding territory and out of it flows the St. Mary's and Suwanee Rivers. It has been sometimes called "Trembling Earth" from the spongy softness of the ground.

Within the swamp are twenty-one principal islands. Many species of trees abound, among them—gum, pine, oak, cypress, bays, magnolia, etc. In the swamp are many birds, some not common, as the eagle, the whooping crane, etc. The water teems with fish of many kinds—trout, bass, jack-fish, bream, warmouth perch, catfish. Alligators plow their way through the mire. Among the wild life there are deer, bears, wild-cats, panthers.

Nectar is Plentiful

Banks of streams are lined with tupelo gum, black gum, maple and many other sources of nectar. Acres of gallberry bushes are interspersed here and there also titi, pepperbush, white holly, calico weed (laurel), etc.

The pioneer commercial beekeeper in this region is Mr. J. J. Wilder who came here from Cordele many years ago. In course of time he has suffered great losses from floods, fires, thieves and the ravages of bears. He has a large chain of apiaries numbering thousands of colonies that almost encircle the swamp. For the most part he uses 8-frame one-story hives, each with a super that serves as a food or brood chamber—food in winter and brood in spring! The hives are then supered as needed.

However, some of his men use two hive bodies the year round, supers being placed on top of these. Making increase simply means setting off the top hive bodies. Strong colonies that obviously would swarm are divided early in the spring and properly supered.

No. 1. Showing effects of the great forest fire in the swamp land some years ago.

No. 2. In the heart of the Okefenokee, looking toward the sunset.

No. 3. Ideal bee location. Tupelo gum, gallberry bushes, titi and black gum.

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Mr. J. J. Wilder looking across bee territory in the Okefenokee.

There are many other beekeepers in this region who keep a smaller number of colonies. Among the pioneers is Mr. Hamp Mizell who was born and reared in the swamp. He has a profound knowledge of swamp life and is a high type citizen. He is an authority on the flora and wild life that abounds on the islands, plains and lakes of the swamp. His bees and other varied interests have kept him a busy man.

Here in the swamp are produced the finest honeys that can be obtained in this part of our great country—gallberry, tupelo gum, white holly, pepperbush. Among the long leaf and slash pines that fringe the border may be found palmetto and red bay. The ponds, bays and hammocks are bordered with titi, black gum, tupelo gum and maple, from small bushes to large trees. Even the somber, grassy prairies are sources of nectar. The honey flows are so limitless I believe the apiaries could safely be increased up to 200 colonies each.

Bears Destroy Apiaries

Inhabitants are scarce and far apart and it is a serious problem to keep bears from destroying whole apiaries. After one of the powerful beasts has spent a night in an apiary it looks as if a cyclone had hit the hives. It's almost beyond imagination what a 400-pound bear can do to bee hives. The bears have been trapped, several large ones have already been caught this year; but from the deep recesses of the swamp they keep coming every year, steadily, surely. Once they get a taste of honey they leave ruin and destruction in their wake. The devastation is so great many beekeepers will not take a chance.

For this and other reasons including thievery, pillaging, fire, floods, etc., beekeeping will always remain a serious problem in this great swampland; and only those skilled in the ways of the wild will succeed. But to the successful there is profit, adventure and romance in this great wonderland of nature, the swamp primeval, probably much the same in appearance as it was a hundred years ago.

Waycross, Ga.

TWO METHODS TO STOP SKUNKS

George S. Stone

After the first frosts skunks will start catching bees, as the ground bugs and insects are gone then.

During the fall of 1938 I was troubled with them and decided to use the steel trap and in fourteen nights I caught nine skunks. It is difficult to get them out of the trap so I tried two other methods which I will relate.

My hives are in pairs on one stand made of 3½" x 4½" fir timbers. They rest seven inches above the ground and require an alighting board, which measures 9 x 15 inches. One side of the alighting board, I cover with galvanized wire, ¼, ½ or 1 inch mesh—any size will do. The skunks will go away as soon as their feet touch this wire.

The second method is to place a board 2 feet long, ¾ inch thick and 4 inches wide in front of the hives with one end on the ground and the other end on the front of the entrance.

The alighting boards are reversible and the wire side is only used about two months in the fall.

Both methods are positive and have been successful with me.

Hanover, Pa.

Comb Honey, Sunshine, Shade and Colors

Leslie Burr

In looking over the September issue of Gleanings there are a number of items that interest me,—some contain fresh ideas, and others give me a desire to express some comments. For example, the first article to catch my attention is the one entitled "Comb Honey" by Carl E. Killion. I expected from the title to find a discussion of either comb honey or comb honey production, but what I found was an article on wintering bees, and with no discussion of any matter pertaining to comb honey.

Temperature of 110 to 115, yet Honey Granulates

The article does not tell where Mr. Killion lives, so I have no idea as to the climate he has to contend with. He does state, however, that he has clover and aster honey, and that such will granulate or ferment in the hive in unsealed cells during the winter. Well, I wonder what he would think of having honey granulate within a few days and the temperature reaching 110 to 115 each day. Facts are, about ten days ago, I cut out some pieces of comb that had been built on top of the frames in an empty comb honey super, and within a week the honey began to granulate. The honey is athol, and of course was not ripe. But in opposition to this, I have seen jars of alfalfa honey that had been candied solid all winter long—but during our hot summer weather in the Imperial Valley here, the honey liquefied. And this liquefying of granulated honey during our summer weather, I have been informed, is quite the usual thing, that is, with honey other than athol.

The Effect of Shade on Bees

The discussion of C. H. Pease on the effect of shade on bees, brings to mind the fact that it was along in the 90's that I first began to check up on the effect of shade on bee hives. During those days, back there in Illinois, about all that I succeeded in determining to my satisfaction was that a poor colony was a poor colony, be it in the sun or shade, and that a good hive of bees was a good hive of bees, whether setting out in the sun or in the shade of a tree.

Later on in Cuba, in an apiary of some 400 colonies where the hives were under palm sheds running north and south, the bees on the east side of the double rows got the morning sun, while with those on the west side the sun did not strike the entrance until afternoon. I again checked on the work done. It was during the white bell-flower flow, which occurred during December and January,—the coldest months of the season. It would be 9:00 a. m. before it was warm enough to work the bees, and the flow would be over for the day early in the afternoon. As to the work done by bees,—I could not see that those facing the east and having the early morning sun produced any more honey.

James Heddon and the Shade Theory

The theory that bees in a hive in the shade did less work than when setting in the sun was held by James Heddon. Back 45 or 50 years ago he ran a school for teaching bee culture. He kept one hive under an apple tree, and it was his custom to send the students over to examine that hive, and report, and the report always was that the bees were producing no surplus.

As to just why the colony in the shade of the apple tree did so poorly,—well, a man who acted as Heddon's stenographer for two seasons once informed me that what Heddon did was to pick out the poorest colony he had each spring and put it under the apple tree. As to who originated the theory that shade was bad for bees,—perhaps the editors of Gleanings can check back through their files and give us some light. But so far as I am now aware, the theory was first given to the public by James Heddon.

Why Bees in the Shade May Be Vicious

Mr. Pease further tells us that he had a colony under an apple tree, and that during the morning hours while in the shade, the bees were vicious, but that later on in the day after the sun struck the hive, they were as gentle as the other colonies of the apiary. As to that,—it does not need a Sherlock Holmes to give the

answer. The trouble was a matter of the temperature of the hive,—not the shade.

Incidentally, the temper of bees differs with the honey flow,—and with the flora the bees are working on. My experience in New York State was, that when the bees were working buckwheat they were always ugly, and were very apt to meet the beekeeper 50 yards from the apiary. Also, bees working on buckwheat will rob. On the other hand, when there is an alfalfa flow on in Northern Colorado, bees could not be induced to rob. I have seen a super of comb honey that had been overlooked, stood on its end at the rear of a bee hive, in an apiary of 50 colonies, and when a week later the super was found, not a cell of honey molested by the bees.

Shade and Swarming

Going back to the matter of shade, I recall an apiary of about 20 colonies or so that belonged to a farmer in northern Colorado. He had placed them under some large apple trees that had never been pruned. I do not believe that any of the hives ever received a ray of direct sunlight during any part of the day. At the time there were some 20 or more apiaries that were being worked, and this apiary of the farmer's under the apple trees produced more honey per hive than any of the other yards. Also, during the two seasons that I spent in Colorado, so far as I know, none of these hives under the apple trees ever cast a swarm. And the only attention the bees ever received was to have supers put on in the spring, and taken off when finished. They were worked for comb honey.

Heat and Color of Hive Paint

Mr. Pease further tells us that Allen Latham insisted that black hives repelled heat, and with which Mr. Pease disagreed.

Well, once upon a time I had occasion to make a study of the subject of light, and I found the facts to be that sunlight is white only when in its entirety, that with a prism we could separate light, and found that it consisted of red, green, and violet rays, and that combinations of these rays produced all the other colors. I further found that an object was red, by reason of the fact that it reflected only the red rays of light; that an object was blue by reason of the fact that it reflected only the rays of light that appeared to us as blue, and the same as to all other colors. Objects that are white reflect all the rays of the sun that are visible to us, and objects that appear black do so because they fail to reflect any of the colored rays of light.

As to the rays of light that are not reflected,—what happens to them is that they are absorbed by the object,—and when a ray of light is absorbed it is turned into heat. So here you have it. A bee hive that is painted white, is white because it reflects all the rays of the sunlight. A red hive is red,—or rather, appears to us as red, because the red paint reflects the red rays,—and absorbs and turns into heat all the other rays. And the black hive is black, because it absorbs all the rays of light, and reflects none of them.

As an example of the advantage of white paint to keep an object cool,—I remember a statement appearing in an article on the United States Navy during the Spanish-American war. Prior to the war, the boats of the United States Navy were painted black, but immediately following the declaration of war the ships were painted white, by reason of the fact that they were going to the tropics. According to the published report, the changing of the color of the ships of the United States Navy from black to white, in the year 1898, lowered the temperature of the ships 18 degrees,—when under the direct rays of the summer sun.

Comb Honey Again

Once upon a time, it was hard to get people interested in honey that was out of the comb. They considered that it was as a matter of course but flavored sugar syrup. But now the scene has changed,—and there are adult people today that have never seen comb honey. Just yesterday, a woman of about 40 years of age, here in El Centro, stated to me, when she saw me take out a frame of partly drawn comb, that that was the first time she had ever seen honey in comb, or knew how the bees built comb. And not only that, but during the past year I have given some comb honey to three different people, all adults, and they did not know that comb honey could be eaten. They thought that it was necessary for them to separate the wax from the honey before using it as a spread for hot biscuits.

(Continued on page 719)

An attractive centerpiece for the Christmas dinner table in this iced and decorated honey fruit cake.

Fruit Cake Masterpieces

Mrs. Benjamin Nielsen

Long-aged, Honey Glazed, They are Fitting for Any Occasion

Does it seem a bit early to be thinking about fruit cakes? Upon first thought you may think it is but remember how that annual rush has a way of slipping up on us homemakers; then we vainly wish we had started preparations early and vow we shall next year. So let's take time by the forelock this year, collect all of our recipes and studying them carefully, decide which ones we shall include for holiday festivities.

Fruit cakes, like honey and pumpkin pie have most unfairly been associated with certain seasons. These fruity concoctions are so delicious and popular it seems a bit strange that enjoyment of these cakes is confined to such a brief span during the holiday season. The modern up-to-the-minute methods of packaging the fruits commonly used in making fruit cakes makes it possible now to obtain the necessary ingredients over a much wider range of time than was possible in grandmother's day. This fact, coupled with its excellent keeping qualities, in which honey plays no small part, proves a boon to busy homemakers. It's grand to have a goodly supply on hand to be trotted forth when unexpected guests drop in. So if you are the official fruitcake maker in your family don't be too economical in estimating your needs. Really go on a splurge—make two or three extra ones. Remember last year—the family couldn't wait to "sample" and the first batch was gone in no time?

Fruits and honey are ever a happy combination; the natural sugars of both blend perfectly and harmoniously; and when permitted to comingle and age, as they do in fruit cakes the resulting flavors are unexcelled. Those fortunate enough to taste your honey fruit cakes may find it hard to name that flavor but guests will remember it—and better yet ask you for the recipes.

The fruity, mosaic appearance of the cake depends largely upon the way in which the fruits and nuts are prepared. The use of a food grinder saves time, 'tis true, but it does not give that "personality plus" we like to see in our fruit cakes. The making of fruit cakes is much less of an ordeal if the fruits and peels are prepared the day before. If placed in a large container, with spices, honey, jelly, preserves and whatever liquid you use, stirred until well blended, covered and let stand over night, it's "something to write home about!" The peels absorb the liquid, the mellow honey flavor and pungent flavors of the spices will penetrate the fruits to produce the finest cakes you ever sliced!

Peels and citron should be cut into thin strips with a sharp knife, then snipped into long slivers or wedges with extra sharp scissors. If you are artistically inclined snip them into stars, triangles and other odd shapes. Candied pineapple rings are best cut with the grain, into thin, even pieces. Candied cherries cut into ruby rings, contribute their bit of beauty to a harmonious whole. Seedless raisins go in whole, but are washed and drained thoroughly. Seeded raisins are cut into strips. To remove excess sugar on preserved fruits, citron, and peel, rinse and dry on a cloth.

If your dried fruit experiments have been confined to the use of raisins and currants there's a cooking thrill in store for you. The lowly prune imparts a rich brown color and flavor not to be forgotten. Steam or boil until soft, dry thoroughly on a cloth, then pit and cut into strips. Dried apricots inject a tart flavor and rich golden color which com-

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bines especially well with honey. Try dried figs for sweet, nutty flavor.

In preparing the nutmeats, pecans and walnuts may be left in large pieces, as they are easily cut, and do not tear the cake. Blanched almonds are slivered lengthwise into quarters, as are peanuts. Ground peanuts impart a delightful flavor and richness. Brazil nuts should be sliced diagonally.

Using a large mixing bowl is a time and temper saver. It makes the blending of ingredients easy and more quickly accomplished. Be sure to mix and mix until the fruits are evenly distributed.

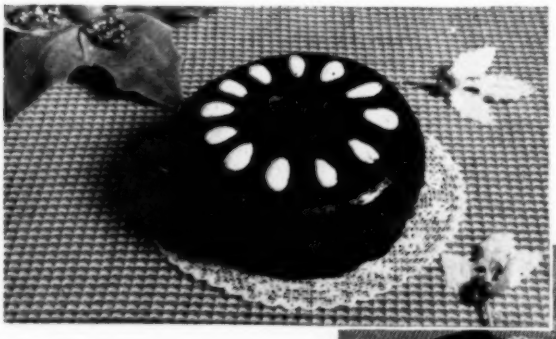
A most important factor is the baking. Tests have proven that tube pans give best results, for the batter bakes more evenly and thoroughly and requires less time. At our house, we still prefer steaming or processing in a hot water bath for two-thirds of the cooking time, then baking in a slow oven, 275 degrees F. for the remaining time. Covers are then removed, the cakes allowed to stand over night to evaporate excess moisture, which might cause spoilage in storage. Covers are fitted tightly and cans are stored.

Baking pans should be well oiled and lined on the sides and bottom with heavy Manila paper to prevent caramelization of the fruits and honey. Grease or oil this paper before fitting with a wax paper lining which should be oiled slightly. If white or light colored fruit cakes are being baked, it is well to cover the tops of the cakes with Manila paper until the last half hour of baking to protect the lovely fair complexion. Cakes are stored in these protective linings.

Fruit cakes require long baking in a slow oven 275 degrees F. Slow baking produces cakes less dry and infinitely better flavored than those baked at high temperatures. Slow baking cooks in the fragrance and flavor of mingled fruits, honey and spices.

Some cooks may prefer to glaze the tops by brushing with honey just before slipping the pans into the oven. Others may prefer using equal parts of honey and water while the cakes are still warm. When cold wrap in several thicknesses of heavy wax paper and store in air-tight tin boxes or covered earthenware jars to mellow for three or four weeks. If you start now one of these delicious fruit cakes may grace your Thanksgiving table and you are sure to give thanks for being able to use Nature's finest sweet in such a delectable way.

Ever tried icing your fruit cakes? A creamy seven-minute honey icing is ideal. Decorated with candied cherries and citron it makes a most attractive centerpiece for the Christmas dinner table. With a few candied



Glaze your choice fruit cakes with honey and decorate as desired.

Honey fruit cake fully ripened, cut into small pieces and dipped in melted dipping chocolate makes a choice gift.

cherries, bits of candied pineapple, plenty of citron (a bit of vegetable coloring to make things more realistic) and a bit of imagination you can deck your cakes with realistic-looking Christmas trees, decorative pine cones, with thin graceful citron spear needles—perhaps even the manger scene. You will think of many attractive designs once you sally forth on the undertaking. Fruit cakes should be iced and ornamented only a few days before cutting. Because fruit cakes are so rich many prefer to ice only the top.

Here's a happy thought for a deluxe "from me to you" gift. Cut your choicest cake, fully ripened, into small fancy shapes and dip into melted dipping chocolate and place on wax paper to set. Decorate with nuts, if desired, then wrap in sparking cellophane, so its enticing goodness peeks through, then catch the gleaming folds with gay ribbon. Or dip small pieces of cake into melted honey fondant (recipes in past December issues of Gleanings) allow to cool, then dip in melted dipping chocolate and place on wax paper to set. It's a flinty heart indeed that will not be warmed by such a gift.

May you find joy in making and serving these carefully tested recipes.

Honey Fruit Cake

One pound dried apricots, 1 pound dried peaches, 1 pound seedless raisins, 4 cups pineapple, 4 cups strawberry preserves, 1 cup grape juice, 2 cups honey, 1 pound dates and 1 pound white figs. Cut dried fruits, except raisins, into small strips; place in an earthenware crock or jar, add honey and grape juice. Mix thoroughly, cover and let stand for one week. At the end of that time assemble: 1 cup butter, 6 eggs, 1 cup flour, 1 teaspoon salt, 2 teaspoons soda, 2 teaspoons cinnamon, 2 teaspoons ginger, ½ teaspoon cloves, ¼ teaspoon nutmeg, 2 teaspoons cardamon seed, 4 ounces candied citron, 2 ounces each of orange and lemon peel. Cream the butter, stir in well-beaten eggs: sift flour, measure and resift with salt, soda and spices; add to first mixture with fruit peels. Add 1 pound of mixed nutmeats, prepared as advised above. Mix well. Place in well-greased and lined pans. Bake three hours in slow oven, 275 degrees F. Batter may be brushed with honey to glaze just before placing in oven. Allow cakes to cool. Then wrap in several thicknesses of heavy waxed paper to store. Makes about 9 pounds.

Two-toned Honey Fruit Cake

For the dark layer: Two and ½ cups flour, ½ teaspoon soda, 2 teaspoons cinnamon, ½ teaspoon cloves, ½ teaspoon nutmeg, ½ teaspoon mace, ½ cup butter, 1 cup honey, 3 eggs, ⅓ cup grape juice, 2½ cups seeded raisins, 1¼ cups thinly-sliced citron, ⅔ cup candied cherries, cut into rings, ⅔ cup candied orange peel, thinly sliced, ½ cup candied pineapple, thinly sliced, ¾ cup currants, 1 cup blanched almonds, slivered, and ½ cup strawberry preserves. Sift the flour, measure and sift with soda and spices. Cream butter until light and fluffy. Add unbeaten eggs, one at a time, beating well after each addition; add honey. Add flour mixture alternately with grape juice, beating thoroughly after each addition. Add fruits and nutmeats, mix well. Add preserves. Blend thoroughly. Pour into well greased and lined tube pan. Cover with light layer for which you will use: 2 cups flour, 2½ teaspoons baking powder, ½ teaspoon salt, ½ cup butter, ⅔ cup honey, 3 eggs, 2 tablespoons coffee, 1 teaspoon almond extract, 1 cup thinly sliced citron, 1 cup thinly sliced lemon peel, 1 cup Sultana raisins, and 1 cup slivered blanched almonds. Sift the flour; measure, and sift again with salt and baking powder. Cream butter well; add honey gradually; cream until light and fluffy; add unbeaten eggs, one at a time, beating well after each addition. Stir in flour mixture, a little at a time, beating well after each addition. Add coffee and flavoring. Fold in fruits and nutmeats; mix well. Pour over dark layer. Bake about 4 hours in slow oven, 275 degrees F.

Another Honey Fruit Cake

One cup candied orange peel, 1 cup candied lemon peel, 3 cups citron, 1 cup candied cherries, 1 cup prunes, 3 cups seedless raisins, 1 cup seeded raisins, 2 teaspoons cinnamon, 2 teaspoons mace, 2 teaspoons nutmeg, 1 teaspoon cloves, 1 cup thick honey orange marmalade, ⅓ cup pineapple juice, 1 cup honey, 1½ cups butter, 1 cup brown sugar, 7 eggs, 5 cups sifted flour, 1 teaspoon salt, 1 teaspoon soda, 1 cup broken walnut meats, and 1 cup slivered blanched almonds. Rinse peels, citron, and cherries; drain and dry

(Continued on page 722)

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A Banker Boosts Honey

John J. Roddy

Educational Displays in Lobby of Bank Make Many People Honey Conscious

The new First National Bank in Marietta, Ohio, has been sponsoring a weekly exhibit in their bank lobby of farm produce in general, and had grocery stores, hotels and restaurants specialize in products exhibited in the bank. For that week they also put up signs in stores advertising home-grown products. This is a widely noted truck farming center, due to its sandy soil in the river valley.

One year slipped by with our competitive trouble in trying to market our honey before I realized what valuable publicity the beekeepers of this Ohio Valley were passing up by not exhibiting their honey at the bank. I immediately went to see Mr. Erble, in charge of the different exhibits and he received me in a most friendly way. He was all interest, because he was trying to put banking on a public relation program, to really show the farmer, beekeeper, and industries of all sorts, that their bank was working to further community progress.

Mr. Erble made plans to exhibit our honey, bees, wax, etc., in the lobby of the bank. Honey was advertised in the daily newspaper. It was on display and any one wishing to see it might call at the bank during banking hours. There was a write-up in the paper advising people to buy home products. I was later to learn that our honey was one of the greatest drawing cards at the bank. Each one told some one else about it and there was a continuous audience watching the bees in the observation hive, and examining the honey. We beekeepers tried to be there part of the time to explain the many things people wish to know about bees. We also put our honey in the stores, hotels and restaurants and they specialized in honey for that week. Some of them kept right on specializing in it as they found their customers wanted it in preference to honeys they were not acquainted with.

Beekeepers and Orchardists Co-operate

Mr. Erble is now working on a merger of the Tri-county Fruit Growers' Association, and Washington County Beekeepers' Association. He hopes to help both beekeeper and orchardist, as their need is mutual. Both are thinking of forming a friendly organization, so that the orchard men may call on beekeepers in need of bees, and of course, pay for them. But the main point will be that they will know where to get the bees when they want them. In turn, we will call on orchard men for influence in getting proper appropriation for the eradication of AFB, which is very bad in our county at present. I have also contacted the Chamber of Commerce, and they have helped considerably in getting a recent re-appropriation for this county.

Mr. Erble, who in the beginning knew nothing about the bee business, has certainly taken a great interest, and can talk bees and honey to any one now. He wants us to exhibit our bees and honey in the bank again and we certainly are going to do so, as it nets us a profit and saves us lots of advertising. But, we do not forget that it is also helping the bank.

It seems to me that it is up to all of us who do not have this working basis with banks to suggest the idea to them. If you do this, I'm sure your banking friends will see the great benefits derived from such a program. It also gives extensive advertising to the producers which we find does more good than direct advertising in the newspaper. Our beekeepers in this section consist of doctors, lawyers and business men who keep bees as a hobby, and the rest are commercial beekeepers who keep them as a good paying side-line on their farms.

We are thinking of starting a centralized honey storage and bottling plant in this county. The idea is to have all producers bring their honey to this plant where it will be graded, processed, bottled and sold under one label. Each producer will pay a nominal rate to keep the concern going. In this way we believe we can get better prices for our honey and also keep a good grade on the market. We have a local radio station for advertising and, all in all, we believe we can make a "go" of it.

Stockton, Ohio.

A Premium on Careless Production

Walter H. Hull

It sometimes happens that a man watching a play from the side-lines will notice things that those actively engaged in it do not see. In that role, it seems to me that the article by Lee E. Sawyer in Gleanings, August, 1939, page 482, misses several important points. The firm of Bryant & Cookinham has a good reputation for trying to cooperate with producers in raising the price of honey to a fair level and generally improving the market. But the first question that comes up in connection with this article indicates the difficulty of maintaining practical cooperation of that sort between men whose business is buying and selling and men whose business is production. Mr. Sawyer urges producers not only to "produce a well-cured, clean and heavy-bodied honey, packed in new cans and cases", but to try to get their neighbors to do the same.

The stick of dynamite in this harmless-looking advice of which Mr. Sawyer is evidently quite unaware but which beekeepers will spot at the first glance is simply that any beekeeper's influence on. his neighbor's method of packing honey is considerably less than zero. In fact, it would be hard to imagine a surer recipe for neighborhood war. Try telling your neighbor how to pack. Not always, perhaps, but more often than not, he will think you are trying to gain some advantage over him and will do almost anything to avoid following your advice.

On the other hand, if it can be hammered home to him that he himself will benefit directly from such a course he will, again not always, but more often than not, follow it.

The honey producer cannot hammer that point home to his neighbor for the simple reason that he lacks the implements to do it with. The honey buyer has more power and can do it if he can convince the neighbor that his well-packed, well-cured, clean and heavy-bodied honey will yield better returns. But there is only one way that the buyer can do it, and that is by paying a correspondingly higher price for that grade of honey.

That raises the second question. Do honey buyers make a point of paying a fair price for high-grade well-packed honey such as Mr. Sawyer recommends? Or do they buy a lot of thin, dirty honey at a ruinously low price (which, however, may be all it is worth) and then in dealing with the careful, competent producer who asks a fair price for his high-grade product, beat him down by citing the low price that they have paid for the other, blandly ignoring the difference in quality? In some cases buyers do just that. And in so doing they put a premium on the low-grade product in that they pay the producer of it as much or even more than it is worth, while the capable, conscientious producer receives for his high-grade product less than it is worth.

It may be impractical for the jobber to attempt to strain and process honey that he finds unfit for use without this processing (or even to inspect it to see whether it is fit for use or not) but if he would do just that for even a few times it would serve as a means of checking up on himself in regard to the real value of different grades of honey.

Pursuing this line of thought a little farther it is impossible to avoid the conclusion that if jobbers really wanted to improve conditions in the honey market (which doubtless they do) they might accomplish it in just that way. By straining and processing the thin, dirty honey and adding the cost of that work to the price they paid for the honey, not forgetting to include the cost of new containers or of washing the old containers before re-filling them and the consequent shrinkage in weight of the resultant product, then comparing this product with the "well-cured, clean and heavy-bodied honey" which they had bought directly from the careful and competent producer, they would have a definite measure of how much more they ought to pay for the good honey than for the sorry stock. And I am laying my bet that it would be so much more than what they have been paying of late that it would put new life into the conscientious producer — provided the shock of surprise did not kill him on the spot.

But it is quite evident from the manner in which Mr. Sawyer dodges

this question of re-conditioning low-grade honey that he does not consider it practical, even while he admits, or rather proves, that its sale is ruining his business.

He does not, apparently, consider it practical even for a co-operative association to take a hand in regulating the quality and pack of the produce it handles, since he completely ignores that vital point in his mention of co-operatives. Yet it is hard for one who knows the rank and file of producers to imagine a successful co-operative that did not take a strong hand in regard to that point, not because all producers or even a majority of them are careless, incompetent, or dishonest, but because there are sure to be some such in any group you can gather and they cannot be ignored.

That being the case, under present conditions with no grading rules enforced, the practice of buying honey direct from the producer and selling again in job lots, often without seeing the product at all, is open to question. Wheat is handled in that manner but definite grades are maintained and even then the buying is generally done through elevator men who can check up on the grades, rather than directly from producers. Apples and other fruits are generally packed and graded by the producer, but according to strict grading rules, with, I believe, adequate penalties for misbranding. And so with many other farm products, but not honey.

True, the government has established grading rules for honey, and I am quite sure that the contents of any package or container marked with one of those grades must conform to that grade. Therefore it would seem that the buyer, by merely stipulating that the honey be graded and marked according to government standards, would automatically protect himself and his customers from the menace of low-grade and off-grade honey, such as Mr. Sawyer mentions. Buyers have not done that. Is it because it would deprive them of the low-price argument which they (in many cases, at least) use as a lever to depress the price of high-grade honey and thus obtain it for less than it is worth? With definite grades maintained the grade would necessarily have to be stipulated when mention was made of price.

That brings us back to the point already noted, that, whether they realize it or not and in spite of the admitted fact that handling off-grade honey is ruining their business, jobbers are really paying a premium for this same off-grade honey.

With honey packed and marked according to government grading rules the jobber would know definitely what he was getting from the producer, and would therefore know what he was selling to his customers. If the customer received a poor grade when he had ordered a good grade he could place the blame where it belonged, demand a proper adjustment, and go on using honey instead of giving up its use, as in the case cited by Mr. Sawyer. And if the baker or any other customer ordered low-grade honey with the idea that it was just as good and that the higher price charged for the higher grades was pure graft (some people do have this idea) he would have no one but himself to blame for the consequences.

Whatever the reasons for buyers not buying according to established grades it seems self-evident that adoption of this plan would automatically remove the menace of low-grade and off-grade honey for any jobber who choses to adopt it. In any case it is futile to ask producers to please see that their honey is well-ripend and clean and packed in neat containers. Some of them will, and would anyway; but there are always too many who won't.

Bath, No. Car.

A BEE-EATING BIRD

M. Harris

Mr. Sieber of Alabama mentioned in July 1938, Gleanings, a bird that ate bees. We have one in this part of the state that eats bees, in fact, which eat nothing but bees and feeds its young on them. The male is red while his mate is yellow with tan trimmings. The beak is formed something like a crow's and, when eating bees this bird pops his beak. They are attracted to a beeyard when a swarm comes out. When the mesquites are blooming, they will sit on the tree and eat the bees while they gather nectar. These birds will also fly to the front of the hive when the bees are not flying out. When singing in the spring they sit on the highest tree and sing the loudest of any bird; the song is a screech.

Batesville, Texas.

From the Field of Experience

NOVEMBER AN IMPORTANT HONEY MONTH

C. M. Littlejohn

Important for the merchandise-minded honey producer is the month of November,—the 30-day calendar period for saying Thanksgiving with honey, as well as innumerable opportunities under the banner of National Honey Week and the country-wide sales promotion of the Institute that does so much to further consumption for the average honeyman.

Honey in November is a distinctive manner of saying "thanks",—the most distinctive manner of rendering sweet, palatable and digestible the most characteristic contribution of America to the world of festivals,—the calendar of annual holidays.

November's biggest pay check may come from these two major occasions,—the one earlier in the month when honey in a host of guises may be featured under the aegis of Honey Week, and the other just prior to the build-up for November 23th (this year) when Thanksgiving tables may be virtually laden with this sweet,—when the active honey producer packs conviction in his campaigns.

A program of plans for promotion must take into account a tie-in with activities of the Honey Institute and a furthering of the desire for honey and more multifarious uses in the particular locality or region of each progressive honey man.

Valuable hints from the Institute are usually high-lighted for the honey week staged in November and careful and painstaking application of these methods may be made.

November, therefore, is a most important month for honey sales and distribution where promotion is active and honey brought to many tables, especially that greatest table of the year, perennially blooming amidst festive flowers, the Thanksgiving Table, "than which there is no than which-er".

For the great feast day and the exceptional merchandising opportunities for honey which it affords, preparation cannot be made too early. So for the first part as well as the latter part of November, thoughts are brought to a focus on honey, and magically out of the pot of honey, the miraculous jar that graces many a festive Thanksgiving table, may flow the most sincere reason for Thanksgiving,—of thanks for this material blessing, and a tribute to the bees.

Seattle, Wash.

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THE GOLDEN RAGWORT

C. W. Wood

My attention was first called to the golden ragwort (*Senecio aureus*) as a producer of nectar and pollen a few years ago while collecting orchids in a wet meadow. It was in July after all the sweet clover in the neighborhood had been cut and not many natural sources were available, which accounts, no doubt, for all the bees on the yellow heads of the ragwort. A search of the available literature when I got home revealed just one reference to the plant, that of Pellett, where he quotes from Bessey (Agricultural Experiment Station of Nebraska, 1895) to the effect that the plant is a source of honey in that state. Its rare occurrence in literature would lead one to the conclusion that it is of minor importance as a source of either nectar or pollen. yet, rather close observation for several years leads me to think that it is not appreciated at its true worth.

It is not at all likely that it yields much surplus in any locality, but, taken in connection with other minor natural sources, it would be surprising if it were not more important than is generally supposed. First of all, its blooming period from May to August covers a period when other sources are coming and going, and it is not hard to see that the ragwort could, and probably does, fill in the gaps between more important crops. All of which leads one to the conclusion that small beekeepers might find it profitable to experiment with the ragwort if they have a suitable place for it. The plant grows naturally in swamps, moist thickets and meadows from Newfoundland west to Wisconsin and south to Missouri and Virginia, though it could no doubt be grown in every section of the United States if it were given similar situations. Incidentally, the

plant possesses not a little ornamental value, its heads of golden yellow daisies being useful as cut flowers as well as for garden decoration. And it really requires less moisture than its natural habitats would indicate.

Copemish, Mich.

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COMMENTS

Allen Latham

Winter brood-rearing is beneficial or it is harmful; depending upon locality and sources of honey. In this locality it is seldom that any surplus is stored before July. Hence it would be very fine if one could curtail brood-rearing until April or early May. To have early brood-rearing means rousing big colonies in early May and starving colonies in early June here.

About 20 years ago there was a very heavy fall of sleet, or frozen rain, the middle of February, when 183 of my strongest colonies were smothered. The 11 to 14 inches of ice pellets made travelling impossible. One could not walk a mile in the stuff without tiring, and an automobile was helpless. My car did not leave the garage for two weeks. I could not get near my out-apiaries. When I opened up those hives I found a layer of dead bees between inner cover and frame tops, between side walls and frame ends. On all sides the bees died trying to get out for air. The combs showed in most cases three frames of brood, some patches being 15 x 5 inches. This in mid-February.

It is largely because of this excessive brood rearing in this locality in double-brood chamber hives that I plan to go back entirely to the single body.

That storm did not kill off the weak colonies because they got air enough. See page 605, October issue.

There is much of good in Chas. E. Phillips' article, page 607, but I think he draws on his imagination somewhat. The winter behavior of his bees does not conform to that of mine. I have often opened hives in winter, and I have yet to find all the bees filled with honey. In fact, most of them seem empty of honey, especially those within the cluster.

Go very slow in driving bees out of supers with smoke—page 610. Some people have a very dull sense of taste, others very acute. I once bought 100 supers of comb honey from a well-known producer. He practiced the smoke method. I sampled many combs of this shipment and did not find one which did not taste of smoke—so much so that I could not enjoy eating the honey, though it was the finest blend of raspberry and clover.

Page 641 (also page 576, September). A fairly large percentage of virgin queens emerge from the cell before the end is entirely cut, leaving a small hinge. The cap snaps back as the virgin emerges. Frequently a zealous cell-tender cements that cap in place. It is, however, silly to think this is done to kill a chance worker in that cell lest she become a laying worker. Too many absurd things about bees get printed. We should remember that many people believe everything in print, and these absurd statements often live to a hoary old age.

I have seen a great many dead imprisoned workers in queen-cells and also a few virgin queens, but I do not believe that in any case the dead bee was imprisoned by intent. Jim McCrary would do well to reconsider his statement. Yet he has brought out a rather suggestive idea. Does eating royal jelly stir up the ovaries of a worker bee? This is quite possible. Laying workers seldom appear until after a colony is broodless and queenless. The bees are producing royal jelly and there are no grubs to feed it to. Is it consumed by the workers? And does this result in bringing on laying workers? This is my question. I do not know the answer.

Page 622 of October and 556 of September. Mr. Pease is apparently trying to stir up Allen Latham. Mr. Pease is of a very controversial nature, and as I have some of that nature myself, here goes.

At our summer meeting Mr. Pease did not get clearly all I said nor did he get what I had in mind. I did not recommend painting hives black rather than white. I never painted a hive black in my life. In 1901 I began making some hives and covering the walls and cover with paroid. Paroid was a product made by the Bird Co. in East Walpole , Mass. I was then teaching in Walpole. I could buy the mill-ends at a very low price. These hives were double and triple walled. Ever since then I have built most of my hives after that fashion. I have close to 300 hives covered with black felt roofing paper.

I have never seen the bees in these

hives suffer from heat though most of them sit out in the open with no shade. To paint a single-walled hive black would be disastrous. The side getting the sun would get intensely hot and melted down combs would likely result. I have even seen hives painted white suffer thus when that white paint was darkened by sulphur compounds.

So a queen is not a queen until she is mated. England had for many years a queen who would not take a husband. Is it possible that Queen Bess was never actually queen? (Now, now, Mr. Pease, do not say anything naughty about Queen Bess.)

I think that the majority of beekeepers will still call virgin queens queens, even though they may not wish such to be mailed to them as laying queens.

It is very true that I have never felt the sting of a laying queen, though I have felt that of a virgin queen many times. I have also many times seen a laying queen thrust out her sting and try her best to sting me. Even a virgin queen can sting only where the skin is thin. Always I have been stung by them on the inner sides of the fingers. They cannot puncture the thicker skin. Since laying queens are seldom so held that they could easily reach that thin skin it follows that one does not get stung by such. Moreover, laying queens are seldom resentful as are three or four day-old virgins. I have never seen them try to sting except when held by leg or wing.

I wonder whether the drinking of goat's milk builds up the controversial nature of a man.

Norwichtown, Conn.

[Read the following from Mr. Pease.—Editor.]

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DO YOU? I DON'T.

C. H. Pease

Do you think that bees in the hive are affected more in the hot midday sunshine when the thermometer points to over 90 in the shade than at 65 with no sunshine but with 95 per cent humidity? I don't, because my bees told me so the morning after I wrote and mailed my contribution to the September Gleanings. The day before, at midday, it was 94 in the shade (as reported in Gleanings) and a handful of bees were clustered out on one colony that was crowded and running for comb honey. The following morning, after a muggy night and the radio told us that the humidity was 95 per cent, before the sun hit the apiary our tested thermometer said 65, and bees were clustered out on two-thirds of the hives in the yard. An explanation for a part of this congestion may be the fact that at midday many bees were out in the fields whereas in the early morning they were all "at home," but, as this was the only morning in all summer that they clustered out at all and the humidity was at almost the saturation limit, does it not indicate that humidity at the lower temperature is more oppressive than dry heat in full sunshine at more than 90 in the shade?

Do you believe that queens reared by the grafting process are better than those produced by natural swarming cells? I don't. I doubt if anyone knows more about queens and queen rearing than Jay Smith, formerly of Vincennes, Indiana, and while he probably produces as fine queens artificially as anyone in the world, he told us in the American Bee Journal, February, 1933, page 51, that "I am willing to believe that old Mother Nature knows her stuff . . . I am frank to say that I believe grafting is a very poor method to use when quality of queens is considered." And to clinch the idea that no one can improve on old Dame Nature's queen rearing methods I quote again from Jay Smith (A. B. J., Sept. 1933, page 340): "I believe if we could have a show of hands of beekeepers who have made a careful study of the subject, ninety-nine out of a hundred would say that queens reared under the swarming impulse are 100 per cent normal. Personally I have never seen nor directly heard of a poor queen being thus reared."

While Dr. C. C. Miller used the grafting method in an experimental way he did not use it for rearing queens for honey production, which indicates that he did not consider himself capable of competing with old Dame Nature as a breeder of queens for practical purposes.

In a controversy between Allen Latham and Jay Smith on queen-rearing, published at length in the American Bee Journal, in 1933, Brother Latham disagreed with Jay; he upheld the grafting method as superior, and said (A. B. J., June, 1933, page 205): "Many times in the two decades I have carefully saved supersedure cells at such times as some favorite breeder was failing and the bees were aware of the fact. I have

saved many such but have to confess that so far as I can recall I never got a really good queen from any one of them."

Now, as to my personal experience, which is somewhat limited, as I have kept bees only twenty years. However, I have kept a complete record and an accurate history of the ancestry of every queen I ever owned, and I have now a queen that is the result of not only one supersedure but two. Her grandmother, a fifty-cent queen from Alabama, came to me late in May, 1935, and, like many other southern queens, was superseded the following month. The next year, in July, 1936, this queen was superseded and the one I have now took her place, she being the result of the two supersedures. Her record proves that she is a No. 1 queen, and as it happens, she is living in my Colony No. 1. She has now completed her third season, giving me three good crops of honey, and in the whole three years her bees have never swarmd nor even started swarming cells. She is by far the best queen I ever owned, in spite of her double supersedure ancestry (or, was it because of it?). She is now going into her third winter and I hope to raise queens from her next year.

If Brother Latham's queens from first supersedure cells always turn out "N. G." perhaps a second supersedure from the same stock is necessary to produce the other extreme, the best ever, as mine did.

Canaan, Conn.

PROPERLY PLACED DISPLAY SELLS HONEY

Benj. Nielsen

Despite drouth, grasshoppers, general hard times and stiff chain store competition, the store shown in the accompanying picture has been successful in selling honey. With several chain stores offering honey at decidedly lower prices, there must be good reason for steady and increasing sales over a period of several years. After a study of the various stores, I have come to the conclusion that the main secret of this store's success in selling honey lies in the properly placed display.

Mr. Lee Miller, the proprietor of this modern, up-to-date store, does not attempt to use any high-pressure salesmanship in selling honey. His store is scrupulously clean at all times and his staff of efficient clerks always eager to please each customer —two prime requisites in building a good business. The honey is placed on the meat display counter where customers cannot help seeing it—and did you notice—right in front of the weighing scales? Perhaps that fact may have had some part in effecting sales. Ever notice how many folks stand in front of the scale being used in a store? Just another quirk of human nature! Why not take advantage of this idiosyncrasy and prevail upon your grocer customers to place your honey in front of the scale?

Mr. Miller stocks honey of excellent quality only and the display is

Mr. Miller, proprietor of this store, does not attempt high pressure salesmanship in selling honey. He places nature's sweet in front of the scales where folks are sure to see it.

Properly placed display sells honey steadily in this modern, up-to-date store.

never a large one: sometimes a reserve supply is kept in the stock room. Thus honey seldom granulates while on display. Should the stock become depleted a telephone call to the producer brings the honey to fill an order promptly. Supplying a customer with "what she wants when she wants it" is another business builder.

The value of proper display was definitely illustrated in another store in this community. The manager had given honey a prominent spot in a well-lighted part of his store; honey sales were steady. Upon remodeling, shelves were built along the walls, and the honey jars were relegated to a niche in one of these modernized shelves. At once, his volume of honey sales began to dwindle. Motto: Honey won't advertise or speak for itself on a dark shelf. Place nature's sweet in a good light, better still, sunlight, to bring out its sparkle and it will prove to be a powerful "silent salesman" in overcoming sales resistance.

Aurora, Nebr.

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SECOND GLANCES

C. M. Isaacson

To me, it is especially timely that the October Gleanings contains discussions of wintering problems, for we have had our first snow—on September 28. Of course, winter is not actually here but it is well to pay heed to the warning.

Mr. Rahmlow insists that midwinter brood rearing is beneficial (pages 605-606) and gives convincing reasons. Many beekeepers will probably disagree, especially those located farther north. I wonder just how low the average winter temperature is at Madison? Locality may affect the problem and his suggestion of "finding out for ourselves" is a good one in any case.

Mr. Phillips (pages 607-609) does this very thing—he lets the bees tell him. It is interesting to note his contention that ample stores stabilize the internal temperature, another score for Dr. Miller's, "millions in our house." I can't agree as well with his ventilation under the bottom-board—I am afraid our below-zero winds would give the bees too much fresh air.

It is good to see a substitute for the carbolic acid method of removing honey (page 610-611). Mr. Hull is very thorough in his description. Careful attention should be taken of the speed necessary if the plan is to be entirely successful, also the danger of too much smoke. I imagine that the cappings may be torn as well, if too much is used.

The top entrance comes up again (on page 612) and Mr. Conner is a strong opponent of it. His argument for the need of summer ventilation

is sound, of course, many beekeepers stagger the supers during a flow to provide it. With a bottom entrance, this draws a current of air through the whole hive—his top entrance would provide some of this automatically.

While I am not in a region producing buckwheat honey to any extent, it is easy to see the value of Dr. Phillips' article to producers who are. Probably other honeys are likewise injured by amateurish methods of heating and a survey to determine such would be of great value to the industry as a whole.

Electric fences are not new in this locality, many farmers have them; but the use described in the article on pages 619-621 is. Their use here as bear protection would have prevented a bad injury to a warden accidentally shot while attempting to hunt down an apiary-raiding bear. The caution against home assembly of fence units is important to note.

Mr. Pease (page 622) doesn't believe that heat can pass through a "spotlessly white painted hive". I suggest that next summer, Mr. Pease, you try placing a pile of supers **without bees in them** in the hot sun, and see if the combs do not soften considerably. The paint only helps, the bees do the main job. Your "bee test" speaks for itself, your colonies were **working** and naturally good bees would not be hanging out, heat or no heat.

Spinster Jane's page is one I always read carefully. It invariably gives one a valuable thought or two to keep in mind. And her concluding sentence on page 644 is surely one we can all say "Amen" to in all sincerity. When "the tumult dies" in Europe, we must, above all, be in condition to help their shattered lands and spirit; and this we can only be by remaining at peace.

On page 637, we find a suggestion well worth following. If Mr. Coulter's plan of furnishing seed to farms deficient in clover succeeds in increasing the bee pasturage, it certainly will be of much benefit to the beekeeper. Testing the soil is a necessary part of the procedure and his point here is one to be taken notice of.

The paragraphs on packing for winter should prove very helpful to the increasing number practicing outdoor wintering. The essentials are given in a clear and concise manner. That a bottom entrance is needed in addition to the upper one is a point not recognized by many.

Last, but of course not least, is the admonition to support the American Honey Institute. Let's all give **something** and not keep a million-dollar helper on a "hand to mouth" basis. If we cannot give what we would like, let's give what we can.

Middle River, Minn.

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RESEARCH REPORT 1939

Robert S. Filmer
Associate Entomologist, New Jersey Agricultural Experiment Station.

Winter Packing Studies

These studies were undertaken in the laboratory at New Brunswick and at the State Apiary at Lebanon, N. J.

The insulation value of the various methods of packing was determined in laboratory tests by measuring the amount of electrical energy necessary to maintain a constant temperature of 90° F. within the hive. All tests were run with empty 2-story bee hives having a bottom entrance reduced to an opening of ⅜ x 2 inches. This series of tests was run out of doors in an open shed which was protected on three sides by a windbreak of the snow fence type. Bee hives were shaded at all times and average wind movement within the enclosure was less than 1 m.p.h. In all tests an uninsulated 2-storied standard 10-frame hive was used as a check, while the time of tests varied from 4 to 6 days.

A summary table of these results follow:

Table 1—Insulation value expressed in the per cent of electrical energy required to maintain a constant temperature of 90° F. within empty insulated bee hives when the unprotected standard 10-frame hive is the basis of comparison.

Standard uninsulated hive	100%
Standard hive plus 1 thickness of slater's felt	91%
Standard hive—entrance plugged	78%
*Standard hive plus ½ inch Celotex sides and top	52%
*Buckeye hive	51%
*Standard hive plus tar paper wrap, 3 inches of shavings	53%
*N. J. (Root) case—4 inches insulation wood and shavings	51%
*Wooden packing case ½ inch plus 2 inches of shavings	52%

*Bottom packing used.

Results

Results of these tests show a very decided advantage in favor of the packed hives. This would mean that during the spring period when early brood is being reared colonies of bees in packed hives would need to expend only one-half the energy re-

quired of unpacked colonies to maintain brood rearing temperatures. This should result in a saving in the energy of the bees and stores consumed in favor of the packed colonies.

It is also evident from this study that where suitable windbreaks are used there is no advantage in favor of the heavier packing.

Lebanon Yard Tests

Tests of various methods of packing were undertaken at the State Apiary at Lebanon. The results of this study are shown in the following table:

Results

Results obtained during the past year do not show any advantage in favor of the packed colonies when performance is based on honey production. It should be remembered, however, that weather conditions were unfavorable for nectar secretion except during the period of sumac bloom, June 25 to July 15. This late honey flow may have allowed the unpacked colonies sufficient time to equal packed colonies in strength as is indicated by the production records.

Table 2—Lebanon Yard Records, 1937-1938.

	Number of Colonies			Winter		
	Prepared for Winter	Alive in Spring	Producing Honey Crop	Stores Consumed 11/1 to 5/1	Stores on 5/1	Surplus Honey 5/1 to 8/1
Packed	22	20	19*	30.7	52.7	112
Wrapped	12	11	10*	32.7	60.0	100.7
No Packing	18	16	10*	30.1	48.2	111.5
Total	52	47	39			

Winter loss—5 colonies—4 queenless, 1 dead.

*8 colonies did not produce crop in 1938 as they were used to make up nuclei for queen rearing.

Packed colonies—2-storied colonies, packed with 4 inches of shavings, 2 colonies to a group.

Tar paper wrapped—single thickness of tar paper—no insulating material.

Announcement

Embargo on the Movement of Bees into the State of Texas or from One County to Another Without a Permit

F. L. Thomas
State Entomologist

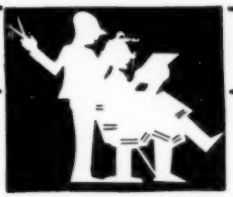
The unauthorized movement of colonies of bees and the consequent danger of spreading infectious brood diseases of bees into clean territory are problems that are growing rapidly in importance in Texas with the development of migratory beekeeping.

As a result of action taken by the Texas Beekeepers' Association in the annual meeting at Lockhart in 1938, aid of the Highway Patrol, Texas Department of Public Safety was requested and readily granted. This very efficient organization was most helpful during the fall of 1938 and the State Entomologist again has been assured by Homer Garrison, Jr., Director of the Texas Department of Public Safety, that the Highway Patrol will be on the lookout to check up on drivers of trucks loaded with bee hives, bees on combs, brood combs or other apiary equipment to see if authorization has been obtained from F. L. Thomas, State Entomologist, College Station, Texas.

Application for **Permit to Move Bees into Texas** must be accompanied by a Certificate of Health based upon a recent inspection and signed by the State Entomologist or Bee Inspector of the State where the shipment originated. Texas Beekeepers should have a **Certificate of Health** or a **Permit to Move on Affidavit** if they intend to transport bees from one county to another. Whenever application is made for a permit to move bees, either into the State or from one county to another, statement should be made showing both consignor and consignee and the number of colonies to be moved. Proper attention to these details on the part of migratory beekeepers will enable them to avoid delay.

College Station, Texas.

Just News



H. S. Paine, Chief of the Carbohydrate Research Division, Bureau of Agricultural Chemistry and Engineering, U. S. Department of Agriculture, announces the addition to its staff of George P. Walton, Associate Chemist, to fill the position left vacant by the transfer of R. E. Lothrop. Mr. Walton will continue the chemical and technological work on honey which was so ably carried on by Mr. Lothrop, and with which the honey industry is familiar through articles which have appeared from time to time in bee journals and through addresses before beekeepers' meetings. Mr. Walton has a background of extensive research experience in the field of carbohydrate chemistry and has devoted much time to the investigation of chemical and technological problems such as those involved in research on honey. He is the author of a large number of scientific publications and is a fellow of the American Association for the Advancement of Science and of the American Institute of Chemists, and a member of the American Chemical Society, and the Washington Academy of Science.

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The Middlesex County, (Mass.) Beekeepers' Association will meet Saturday, November 25, at 7 P. M., at the Agricultural Extension Service Building, 19 Everett St., Concord, Mass. A delicious "honey way" supper will be served to all attending. Mrs. Walter M. Copeland is president of the Ladies' Auxiliary which is responsible for these attractive supper features. Mr. Benjamin R. Hildreth of E. Holliston will present a paper on "Bee Rentals".—A. M. Southwick, Sec'y., Waban, Mass.

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The Alabama Beekeepers' Association at its annual meeting, in Birmingham, October 4, changed its policy regarding officers elected. In order to increase the interest in the Association the following officers were elected: President, J. T. Haertel, Citronelle, Alabama; 1st. Vice-Pres., Bagley Hall, Birmingham, Ala.; 2nd. Vice-Pres., Eugene Cutts, Montgomery, Ala.; 3rd. Vice-Pres., Slayton Graydon, Greenville, Ala.; Sec.-Treas., F. E. Guyton, Auburn, Alabama.—J. M. Robinson, Auburn, Ala.

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A big joint Convention of the Oregon and Washington beekeepers will be held Thursday and Friday, November 2 and 3, 1939, in Walla Walla, Washington. Headquarters: Marcus Whitman Hotel. A full interesting, educational program is being arranged. Such subjects as: Inspection and Plans for the Future; Standardization and Advertising Honey; Legislation, and other subjects of vital importance to the bee industry. We have three prominent eastern speakers scheduled: Mr. H. J. Clay, Washington, D. C., Honey Market Reports; Mr. M. S. Stone, Superior Honey Co., Ogden, Utah; and Mr. E. R. Root, Medina, Ohio. Thursday evening, November 2, 6:30 p. m. in the Banquet room of the Marcus Whitman Hotel we will have a grand get-together time and banquet, with after-dinner speakers and entertainment. We extend a cordial invitation to beekeepers everywhere to meet with us.—H. A. Scullen, Secretary, Oregon State Beekeepers' Association and Mrs. Eva Wixom, Secretary, Washington State Beekeepers' Association.

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On November 4th, the same men who are appearing on the joint Oregon-Washington beekeepers' convention, will meet with the Portland local Association.—H. A. Scullen, Corvallis, Oregon.

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Mr. George Fernes, Fox Chase, Philadelphia, Pa., passed away on September 12, 1939, after a brief illness. Mr. Fernes will be greatly missed by all as he lent much help in the reorganizing of the old Philadelphia Beekeepers' Association. His suggestions were always a help to beekeepers.

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The annual meeting of the Colorado Beekeepers' Association will be held on November 21, in Denver. Some splendid speakers are being secured. A very cordial invitation is extended to all.

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The annual meeting of the Iowa Beekeepers' Association will be held at Des Moines, November 16 and 17.

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This summer marked the passing of one of South Dakota's interesting beekeeping personalities, Mrs. Charles Blackwell, who died at her home in Rapid City on June 12, at the age of 68. Up until a year before her death she con-

(Continued on page 720)

Editorials

Gleanings will be represented in the big Sacramento meeting on November 7 to 10 in the persons of E. R. Root and J. T. Calvert.

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There are some things we can learn from box hive wintering. Knot holes and split covers provided top ventilation and escape of moisture.

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The late summer and early fall drouth has been severe in many localities of the East. Asters and goldenrods are a great help in normal times.

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Unused bee equipment where bees have died or where the owners have quit keeping bees is always a source of great danger. See article by Inspector Don P. Barrett, page 706.

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The Michigan Beekeeper, edited by Elmer Carroll of Lansing, Mich., is worthy of the support of all Michigan beekeepers. Price 50c a year. Michigan is one of the Eastern states that leads in honey production.

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R. H. Kelty of Michigan has said that supersedure in package bees is our most serious problem in production today. We shall have something on this in the near future. The fault lays with both the shipper and consignee.

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The New and Old Orthodoxy of Wintering The attention of the reader is drawn to the chapter taken from the 1940 edition of the A B C and X Y Z of Bee Culture on Wintering. So many changes in theory and practice have taken place on this much mooted question that it was thought best to rewrite the whole article from beginning to end. In this article the author (E. R. Root) presents not necessarily his views, but the concensus of opinion as he has picked it up in Government bulletins and interviews with the best authorities over the country.

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The Root Portable Windbreak The cover picture of this issue shows one of the Root outyards with a portable windbreak surrounding it. The boards must be spaced about an inch apart to prevent wind from glancing upward and then downward. It is better to have the wind filter through slowly. By spacing the boards it breaks the force of the blast.

The fence is made up of panels, each about sixteen feet long or the length of the boards. Cross pieces at each end bind the panels.

Instead of posts that are expensive the panels are held up by braces on each side of the fence as shown. These are nailed to stakes.

When it is desired to move the yards to a better location pull the stakes, knock loose the braces, and then load the panels and braces on a truck, the same one used for moving the bees later.

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November a Good Month to Move Apiaries Moving an apiary is quite a job, especially during hot weather. Moving may be done during this month to good advantage, in the North. There is the minimum of brood in the colonies and cool weather permits moving a reasonable distance by truck, using only entrance screens.

Those who have apiaries to move should get the moving done this fall, if possible. If this work is left until spring the colonies will then have considerable brood and moving will be more difficult.

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Top Supering This method of supering which means adding supers on top of the pile instead of underneath, or directly above the brood chamber, is now being used by a large number of beekeepers. It saves much labor and simplifies supering.

Dr. E. J. Dyce, Provincial apiary inspector of Ontario, says on page 177 of June, 1939, Canadian Bee Journal:

"Top supering is gaining in popularity. Tests conducted at experimental stations show the bees store as much honey when the empty supers are placed on top of the hive as when they are added next to the brood chamber."

Can AFB be Stamped Out? Readers who may be skeptical about the value of thorough bee inspection work and the methods now used, should read carefully the last paragraph of the report from E. S. Miller, Valparaiso, Indiana, page 701, of this issue.

The time was, in some states at least, when the bee inspector was looked upon as one more government man to be tolerated. Today the apiary inspector is considered the beekeeper's friend. Disease eradication is progressing rapidly over the country, especially where adequate appropriations are being secured for inspection work.

More power to our efficient corps of apiary inspectors who are working for the good of the beekeeper and our industry.

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Honey Nut Ice Cream This is now being placarded by a prominent chain store as something wonderfully fine. If your drug stores do not offer it for sale ask for it. If they do not know about it tell them how to make it.

Use ordinary vanilla ice cream in a dish or glass container and sprinkle it liberally with nuts. Place this before the customer and then give him a dripcut full of honey. With this dispenser the customer can pour or drizzle the honey over the cream and the nuts. The honey will be "waxy" and just right and Oh, how good!

Sell this idea to all the drug stores or soda fountains in your town. Of course, sell your honey and a couple of dripcuts which are just the thing for honey-nut dip ice cream

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Late Flow From Aster The small white wild aster found in many states is proving to be a life-saver for many colonies this fall. During the hot, dry weather early in the fall goldenrod and buckwheat did not yield normally and there appeared to be danger of a shortage of winter stores. In states where white aster is abundant normal colonies have plugged brood chambers full of aster honey. The hot weather has enabled bees to properly cure this honey.

Where a rapid aster flow is followed by cold weather bees do not have an opportunity to ripen the honey and such winter stores with a high percentage of water usually causes poor wintering, especially if the bees do not have opportunity for frequent cleansing flights. When the aster flow is followed by warm weather the bees have a chance to ripen the honey and thus make it more suitable for winter stores.

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Supersedure in Late Summer and Fall Months An increasing number of beekeepers are operating their colonies in double brood chamber hives throughout the year. Queens in large brood chambers have a chance to lay to their capacity, provided, of course, supers are given in ample time to prevent congestion in the brood chamber.

In regions where the main honey flow is long drawn-out due to the prevalence of sweet clover and alfalfa there is a terrific strain on queens and many of them are superseded each season. In Western Ohio where the Root Co. has commercial honey yards, a high percentage of queens are superseded in the late summer and fall at a time when normal supersedure does not interfere materially with the storage of surplus honey.

Provided the stock is good, queens reared by the supersedure impulse are of superior quality.

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Beeswax Prices and the New World War Many users of beeswax, remembering the high prices which beeswax brought at the end of the last World War, started out on a buying campaign in September bringing on a temporary or apparent shortage. September is early for most producers of wax to have their wax ready for market. September is also just before heavy shipments of wax start coming in from South America. It is well to look at the situation frankly and fairly.

That beeswax is one of the best waterproofing materials known is granted. Some beeswax was used for waterproofing of war materials in the first World War. No one knows the exact amount so used but in all probability the volume was not great enough to justify in itself the 40c price that prevailed at one time. About the time the Armistice was signed, all prices were up. Honey brought 20c, sugar 30 to 35c per pound, butter and other foods in proportion. It is probable that beeswax did not increase as much as many commodities and it is, therefore, unlikely that uses of beeswax for war

material had any appreciable effect on the price.

If this country should be dragged into the war, the price of beeswax would rise; so would the price of honey. However, everything that the producer and everyone else would have to buy would also be at extremely high prices, indicating merely that the buying power of the dollar declines under such abnormal conditions.

In the early part of the last World War, wax from Brazil and Chile and certain other South American countries, which could not be shipped safely to Europe, was shipped to New York until the price actually went down in consequence of a large accumulation. There is, perhaps, more danger that history may repeat itself and that there may be a big accumulation of beeswax in New York again, than that the price may soon be higher because we are dragged into the War. The price of beeswax may go down, it may go up. One who holds for higher prices may ultimately sell at higher prices, but at the same time, he may pay as much or more for everything that he, himself, buys. On the other hand, if wax does go down, the one who holds, not only loses the interest on the investment and the insurance, but he gets no reward.

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Viscosity and Thixotropy The thickness, or slowness in flowing of honey, is usually called "body". A thick honey of good body is referred to as having a high viscosity, whereas a thin, free-flowing honey is said to possess low viscosity. Viscosity in honey is very markedly affected by temperature. As every beekeeper knows, honey becomes thinner when it is warmed. Honey mixes more readily when its viscosity is low so that warm honey blends more readily than cold honey. In this connection it should be pointed out, however, that when honey is warmed, the greatest decrease in viscosity takes place between room temperature and 100° F. Above 120° F. the decrease in viscosity with increase of temperature is very small, so no appreciable advantage is gained by warming above this temperature for purposes of blending. In fact, even lower temperatures may be used effectively.

The chemical composition of honey influences its viscosity to an appreciable extent. The greatest effect on viscosity is necessarily due to moisture content. An increase of 1% in the water content of honey produces a very decided decrease in viscosity. The so-called dextrins that are present in honeydew honey in considerable quantities perhaps exert a greater influence than any other single composition factor (with the exception of the water content). Honeydew, or honey containing a high "dextrin" content, is considerably more viscous than floral honeys of corresponding moisture content. In a similar manner, the proportion of dextrose and levulose present in a honey exerts some influence on the viscosity. A levulose solution is less viscous than a dextrose solution of corresponding density, so that honey such as tupelo that contains extremely high proportions of levulose is found to be somewhat less viscous than a honey of corresponding water content containing approximately equal quantities of the two sugars. This effect, however, is not so pronounced as is that due to the dextrins. Proteins and other colloidal substances also tend to increase the viscosity of honey. Since the quantity of these substances found in honey is usually quite small, the effect on viscosity is not very great.

In Europe there is produced a honey from heather of such high viscosity that it will not run out of a bottle when it is inverted. Besides being highly viscous, this honey exhibits another peculiar property that is referred to as "thixotropy". By this is meant that the honey will change its viscosity merely by agitation, that is, the viscosity is decreased very materially when shaken. Substances that show this behavior are referred to as "thixotropic". This property is frequently exhibited by colloidal substances, so that the behavior of heather honey in this respect is due to the presence of some colloidal substance. A bentonite suspension, for example, assumes a jelly-like consistency when it stands for some time, but if shaken returns to a fluid state. Honey obtained from heather must be agitated in order to remove it from the comb by centrifuging. While no honey produced in this country exhibits this phenomenon to the same extent as heather, it has been found by J. Pryce-Jones of England that buckwheat honey and certain other types are thixotropic to some extent.—R. E. Lothrop.

From North, East, West and South

SOUTHERN CALIFORNIA, October 1.

Weather: All records for hot weather and rainfall in September have been broken. Clouds from the South and East seemed to meet clouds from over the ocean, causing tremendous rains that reached over 200 miles inland. High winds and a rough ocean caught and wrecked a number of small craft causing the loss of a number of lives as well as much damage to wharves and other property. Some places got six or seven inches while other sections did not get over one inch. Railroads and highways were out of commission for a time in the desert country. Lightening started a number of fires but the damage was small. Some damage was done to farm crops, such as beans and alfalfa hay that were still in the fields.

Rain that falls after August moistens the soil to a depth reaching the roots of the sages, wild buckwheat and other honey producing shrubs, and adds materially to the prospects for a honey crop the following year.

Crop: The 1939 crop is off the hives and most of it has gone to market. A few beekeepers who left the supers on until late and then took off all of the surplus combs still have a little honey on hand. This is light amber in color. We do not know of any white honey in the hands of the producer. A slow and declining market last year, then an active demand and advancing price this year caused almost every one to sell his white honey early.

Market: The demand is good with prices about one cent above last year. Beeswax is in demand at an advance of about three cents per pound.

Miscellaneous: Many beekeepers throughout Southern California feel it is necessary to move to the orange groves in early spring. It does not pay to move any but the heavy populous colonies as they are the ones that get the honey. Orange is as infallible a source of honey as any we know of and it is seldom a beekeeper does not get enough honey to pay the expenses of the moving.

That article "The Flowers and the Bees", by Frank J. Taylor, page 26 in September 9 Colliers, is a good write-up of that congenial fellow-beekeeper Charles Kinzie and his bees.—L. L. Andrews, Corona, California.

NORTHERN CALIFORNIA, October 4.

Weather: Fall has come for Northern California with a gradual drop in temperatures from the extended heat wave of the few weeks past. Gentle rains have fallen over most of the region with snow reported in the higher mountain passes. The highway crews have shined up their snow-fighting equipment and the main highways leading into California will be kept clear for travel as usual. The rains have prolonged to some extent the late flowers which yield an important source of nectar and pollen for winter stores. Beekeepers who have examined their colonies recently, have found many short of honey and pollen for winter.

Honey Flow: The honey flow, as far as surplus is concerned, is over and practically all surplus is in the can. From reports received, a 40% normal crop will not be far wrong as some sections have received practically no surplus while others report "better than expected" when prospects a month or so ago indicated a practical failure. But there will be honey for sale in California this fall and winter and beeswax is being held generally for a better market. Only a few beekeepers have any sizeable amount of honey on hand, some of which will not be sold until the demand improves.

Honey Market: What effect will the war have on honey prices? We might as well ask, on the prices of all commodities in general? We can rest assured that there will be no influx of imports into this country to lower any of our present prices. Our production next year may balance the extra amount of food shipped out—in foreign boats, we hope—to nations at war. Unless the earning power of the people increases, there will be no great increase in commodity prices except in those seriously affected by lack of imports. The flurry in sugar prices was a bit premature, the result of a tendency to buy for the future as a result of experiences some twenty years ago. Honey may sell for one or two cents more per pound over last year, but that is no more than it should sell for even in normal years.

Miscellaneous: A keen interest is being shown in county and sectional meetings, if we are to judge by the attendance at the conventions of other farm groups. And this seems to be the case in the forthcoming National Beekeeping Conferences scheduled for Sacramento, November 7 to 10.—J. E. Eckert, Davis, Calif.

TEXAS, October 1.

Weather: September was most pleasant but very disappointing. The rains which commenced in August brought new vegetation into good condition. The first third of September was without any precipitation whatever and was accompanied by some of the hottest weather of the entire summer.

Market: Honey assemblers are making inquiries for honey but the supply in the hands of beekeepers is small. No offerings have been recorded. On the Edwards Plateau evergreen sumac is in bloom but no report is at hand as to whether or not it is yielding nectar. Reports from several large beekeepers say that due to the shortness of stores and the liability of advance in sugar prices they will not market the remainder of the honey at hand.

Miscellaneous: The natural instinct of a bee to be busy at all times is extremely valuable in this prolonged dearth of honey. During the past month bees have worked flowers for which there is no record of former visits. The hives on scales show that the bees in spite of a dearth of their common food plants have been able to bring in something of value to them as the hives have lost but little in weight and a fair complement of workers have been reared for the winter. The Apicultural Laboratory reports that some three years ago the seed of *Dalea argyraea* A. Gray was obtained from West Texas. The plant was said to be one of remarkable beauty and a good browse plant but due to the heavy grazing this plant had been almost exterminated. The seed obtained grew easily and during this month the plants have come into abundant bloom. The report as to the beauty of the plant is not exaggerated. The leaves are small silver gray, the flowers white and red. At a little distance the plants look like red-flowered alfalfa. Whether or not the plant is a nectar producing one is yet to be seen. As this is the only plant in the neighborhood of the large apiary it is covered from daylight until dark with honeybees. There is not a sufficient amount of it to tell as to its yield. Because of the stories of its disappearance from what was once a good honey production section of the State one is led to believe from observations made here that the eradication of this plant by cattle may have had something to do with the drop in honey production in that particular section.—H. B. Parks, San Antonio, Texas.

BRITISH COLUMBIA, October 3.

Conditions: 1939 brought its share of disappointments and surprises to British Columbia beekeepers and the net result has been a crop estimated at 60% of that of last year. Here in the interior dry belt, extra moisture in June promised well for a crop in July but as in our case this comes largely from alfalfa things did not work out as expected.

Cool showery weather prevented the cutting of alfalfa until blossoms were well developed but the same weather conditions prevented bees from taking advantage of the opportunity.

For second crop alfalfa the weather was so perfect that cutting was carried on with extra dispatch and again the bees had small chance. A very dry summer brought the honey flow to an early finish and that condition seems to have been general throughout the Province. Comb honey in particular is in short supply. Egg laying by the queens ceased exceptionally early and of colonies examined during the last week in September, at least 50 per cent were broodless.

Market: Locally, sales of honey seem to have kept up well and with little change in price. Large shipments of honey imported from other provinces just prior to this season's extracting have weighed down the market. With a short crop generally in Canada this condition should right itself.

The chief problem of the moment is the securing of supplies of sugar for winter feeding and the beekeeper who this year has his hives equipped with well-stocked food chambers is in a preferred position.

Miscellaneous: At the Canadian Pacific Exhibition held at Vancouver, August 26 to September 4, the honey exhibit was outstanding. Interior beekeepers were well represented and carried off major awards. The special diploma for the best sample of honey in the show went to a Vancouver Island beeman while the first prize in comb sections went to a Manitoba exhibitor. On the same day comb honey sections from B. C. won first place at the Canadian National Exhibition at Toronto.

A new development in the fruit industry may be of help to us in reduction of losses from spray poisoning. This is the use of Cryolite (Sodium Aluminum Fluoride) as a substitute for arsenate of lead in codling moth control, chiefly owing to demands of importers in overseas markets who threaten to enforce regulations against arsenical content left as spray residue. Cryolite is used as yet only during the last half of the spray season or the months of July and August. Other

years this has been the period of our heaviest losses due to the fact that in many orchards alfalfa or sweet clover are in place as cover crops under the fruit trees and are in full bloom at that time. The cryolite is used locally with fish oil as a spreader and the odor of this is probably objectionable to the bees. We do not blame them.

The B. C. Honey Producers' Assn. is trying to line up a delegation for the National Convention at Sacramento and much interest is being shown.—G. F. Pearcey, Kelowna, British Columbia.

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OREGON, October 2.

Weather: Strange as it may seem, we have not been having anthing in the way of unusual weather, other than possibly a little less rain for September than we might ordinarily expect. After a very much prolonged dry season in early and mid-summer, the drouth was broken by a fairly satisfactory rain. The results are that the honey flora is in about a normal condition. The bees are also entering winter with a normal supply of honey in storage.

Honey Crop: The honey crop in the Northwest seems to have been somewhat spotted. Reports from the fireweed area indicate that there has been almost a complete failure in that section, due, largely, to the fires which caused the air to be so heavy with smoke that bees were unable to work. In a few cases beekeepers lost heavily from the fire which swept through the apiaries. Reports from eastern Oregon seem to indicate a crop somewhat short of the usual expectations. In the Willamette Valley the crop has been about normal in quantity and quality.

Market: The market has apparently picked up rather rapidly in the last two or three weeks. However, there is very little indication of an increase in retail price so far. Some distressed lots have been selling at an unusually low price.

Beekeepers' Meetings: Arrangements have been made to have another joint meeting of the Oregon and Washington Beekeepers' Associations this year, to be held at Walla Walla, Washington. The meeting dates are November 2 and 3. We have also been assured that Mr. E. R. Root of The A. I. Root Company, and Mr. Harold J. Clay of the National Marketing Service, will be with us. We have every reason to believe that there will be other eastern men who will stop over on their way to the national meetings at Sacramento. Arrangements have also been made for the entertainment of these visitors as they pass through Portland, under the auspices of the Portland Beekeepers' Association. The Portland Association is a live bunch of beekeepers and will show the visitors a good time and a lot of interesting country in the short time they may be able to spend in that neighborhood as they pass through on their way to the national meetings in California. The meeting will be held in Portland in the afternoon or evening of November 4, and opportunity will be provided for the sight-seeing trip on the Columbia Highway for those who are interested.

Many Oregon and Washington beekeepers will likely be planning to attend the national meetings in Sacramento, November 7 to 10. All who are interested in driving to Sacramento are urged to get in touch with the writer and indicate if they will be able to take passengers or would like to ride with someone else and share the expense.—H. A. Scullen, Corvallis, Oregon.

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SASKATCHEWAN, October 5.

Weather: Our weather varied considerably during the summer. Our honey producing area is approximately 300 miles long from North to South, and from 150 to 250 miles wide from East to West. Considerable hot, dry weather was experienced in the south half of this area. In the North frequent rains were secured and better nectar producing conditions obtained.

Honey Crop: On the whole, the crop was very satisfactory, and while we still do not have definite records on this year's production, we estimate that the average per colony yield will be higher than last year, making the total output for the Province perhaps 25% more than last year. With the possible exception of Alberta, Saskatchewan is the only Province showing an increase in production this season, as reports reaching us from Quebec, Ontario, and Manitoba indicate that their yields are from 40 to 60% of last season.

As is usually the case in a season of good average production, the quality of the honey is exceptionally good. Of several hundred samples tested for moisture to date, only one has tested above 17.8% moisture, and 90% of them have tested better than 17% moisture. The best sample tested 15.2% moisture and quite a large number of samples tested 16 to 16.5% moisture.

The market opened with the prices very low, owing to a carry-over of 1938 honey

in Manitoba, and although prices have risen since that time, the rise has not been rapid. We are satisfied, however, that the price will go up much further, because of the short crop throughout the Dominion, and also because of the fact that the war will now tend to have a bullish effect on all food prices.

Miscellaneous: This spring the larger honey producers in this province organized the Saskatchewan Honey Producers' Co-operative Association with the object of marketing their honey as a group in the same manner as is being practiced so successfully in Ontario by the Ontario Honey Producers' Co-operative Company, Limited. In fact the Saskatchewan Association was patterned on the Ontario organization and received a great deal of valuable help and guidance in its formation from the Ontario group.

In its first year of operation the Saskatchewan Honey Producers' Co-operative Association is handling a large share of the commercial honey produced in Saskatchewan. It is, of course, too early to be able to give any estimate as to the effectiveness of this new group, but, it has the support of practically all the commercial beekeepers in the Province. It should be able to exert considerable influence in getting Saskatchewan honey on the market in a standard and satisfactory form at a price that will realize profit to the producer.—P. M. Pugh, Regina, Sask., Canada.

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NEBRASKA, September 30.

Weather: Hot and dry sums up the weather situation for the summer in Nebraska. Our last good rain came July 4, since then no rain of any consequence has fallen. High temperatures, accompanied by hot winds shriveled our wheat crop. A brief respite of cooler weather in August aroused hopes for a corn crop. But no rain came and searing winds soon burned fields white. Pastures are brown. Old timers say this is the worst fall drouth ever experienced; fields are too dry to be plowed. Surprisingly, sweet clover did well, despite drouth and extensive grasshopper damage.

Honey Crop: The beekeepers fared far better than the farmers. Reports show that the crop, while short, is the best in five years and the quality very good. This crop is due principally to the fact that bees went into last winter in good shape, the winter was mild, followed by a most favorable spring. Good weather permitted bees to take full advantage of abundant fruit bloom. Good rains in June gave clovers a helping hand to further favor the beekeepers. Bees took full advantage of the long, hot, cloudless days which spelled ruin to other crops. Smartweed, or heartsease bloom was the heaviest here in many years; roadsides and creeks were crammed with heavy pink bloom, even fields were dusty pink. Had conditions been normal, this would have meant a heavy fall flow, as frosts came late, September 29. Little surplus of this dark honey has been stored.

Prospects: Bees are in good condition at present, due to smartweed flow. Rain is needed badly for honey plants. A hard winter is predicted and while we may scoff at the idea of foretelling, it is wise to make sure now that bees have plenty of stores and to provide adequate windbreaks. Packing was not necessary last year but may be a wise precaution this year.

Market: Honey sales are fair with prices firm to a shade lower. Chain stores are stocking inferior grades and advertising a cheaper price. The beekeeper should not become panicky and cut his price to meet this competition; emphasize quality, demonstrate your good, clean pack and keep in mind the fact that crops, generally, are short.

Miscellaneous: For an increased demand for honey we give due credit to the capable and excellent efforts of the American Honey Institute. It deserves more support than Nebraska beekeepers have been able to give during the past several years.

The writer purchased package bees the middle of April, and at the beginning of the main flow, united these with old established colonies, not quite up to par, thus obtaining very strong colonies which took full advantage of the clovers, before grasshoppers damaged the clovers. Results were so gratifying we plan to make a practice of this procedure.—Benj. Nielsen, Aurora, Nebr.

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NEW MEXICO, October 3.

Weather: Fall is upon us and with the harvest about completed bees in the mountains will be put into the cellar the middle of the month. We have had but one rainy spell recently and feel that the next one that arrives will be snow. Heavy frosts have stilled all growth except the white biennial clover which keeps right on growing. There has been ice on the water every morning now for a week and when the sun dips behind the mountains we pull on our jackets.

Crop: The crop is already extracted in

most localities and it will be necessary to warm the frames here before extracting, as we left the honey on too long and cool weather has started the bees to clustering. As stated in a previous article, the crop this year in the mountains was the best in four years and with more acreage in clover to bloom next year it is hoped that next season will be as good or better than this one. We plan to increase in the spring with packages.

Market: The market has remained even and since most of my selling is done by way of barter, the price is as it has been —a matter of trading. The European situation will not affect this particular market although it naturally will enhance the general market.

Miscellaneous:—We have been successful in raising the mean temperature of the bee cellar by extending the inside end of the incoming ventilator up another three feet and extending the back exit ventilator down inside the cellar until it was within six inches of the floor. This raised our mean temperature three degrees over and above the mean at this time last year. Our outside temperatures last year were comparable.

I believe that my particular future here with bees as well as the future of any other commercial beemen similarly located lies in carrying over say 100 strong colonies in the cellar and then dividing them in the late spring and using packages to bolster strength for immediate build-up.—C. A. Baltzley, Pecos, N. M.

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IOWA, October 2.

Weather: After a very wet August, we had a dry September, and it is still dry at this writing. The honey plants are going into winter quarters short of moisture unless rains come soon. The fall flow was not what it should have been and in some localities it will be to the beekeeper's benefit to examine the colonies and be sure they have enough for winter stores.

Some beekeepers have had a fair flow the past season while others report medium to nothing. Moisture has been spasmodic which is not conducive to a good honey flow.

Market: There is not much change in the quotations of honey since my last article. It is selling very reasonably considering the flow. A 90% white clover honey slightly mixed with basswood is being offered at 7c in 60-lb. cans. Comb is quoted higher, from 15 to 19c per section. There seems to be a good demand for honey this fall and in all likelihood the crop will easily be cleaned up long before another crop rolls around.—W. S. Pangburn, Center Junction, Ia.

KANSAS, October 3.

Weather: July was a hot, dry month following a cool, comfortable, moist June. During July the temperatures changed from cool to above 100° F. very rapidly, and then maintained near 100° F. temperatures throughout the month. This high temperature seriously injured many plants and stopped the nectar secretion within a short time. August 1 to 16 was a cool, moist period in which plants began growing again. Following this period there has been a six weeks' drouth with temperatures above 100° F. during the first week in September. On September 28 the first good rain came, varying from ¼ to 1½ inches in eastern Kansas. At that time the weather cooled and part of the time the average temperature was about 12° F. below normal. The first light frost of the season occurred on September 30. The moisture conditions at the present time are decidedly deficient and drouth conditions still prevail.

Condition of Colonies: Where colonies had sufficient food during the spring to enable them to build up population sufficient to gather the honey crop, brood-rearing has been maintained at all times. Where enough honey has been left on the colonies, they are in good condition for wintering. During the last two weeks of August there was a light smartweed flow in eastern Kansas, which stimulated colonies to brood-rearing for a short time.

Crop: Most of the commercial beekeepers obtained a fair to excellent crop of honey this year, due to satisfactory late spring environmental conditions. Many beekeepers obtained at least 50 pounds surplus honey per colony, and most of them obtained 150 to 200 pounds surplus honey per colony.

Market: During the last part of the summer, the Kansas City honey market had a slight slump, but during the first two weeks of September returned to normal. Honey sales are continuing steady.

Miscellaneous: The bee and honey exhibit at the Kansas State Fair at Hutchinson, Kansas, September 16 to 22, was the best that has been shown for the past several years. The comb and extracted honey exhibits were excellent. The educational exhibits were improved over the past years, so that on the whole the exhibits were extremely attractive as well as educational.—R. L. Parker, Manhattan, Kans.

INDIANA, October 5.

Weather: The weather has been exceedingly hot and dry during the greater part of September, resulting not only in a curtailment of this year's crop but also in lessening the prospects for another clover year. On October 1, occurred our first frost. This will finish all nectar-bearing flowers except, perhaps, the asters, which seem to stand more cold than any other fall flowers. However, in this locality, bees seldom gather much nectar in October unless the weather remains exceptionally warm. With sufficient rain the clovers may revive, but at present there is little moisture in the soil.

Conditions: Accompanying our state bee inspector, I have just finished touring the county, having visited more than a hundred small apiaries. I find that most beekeepers have succeeded in harvesting a multiplicity of swarms and very little honey. It seems that many are incapable of learning better methods. Many do not read bee literature. Others who do read just don't "savvy". A considerable number try to stop swarming by picking out queen cells which, of course, gets them nowhere. Beekeepers using better methods have averaged about 60 pounds of clover honey per colony, perhaps about one-third of last year's crop. As to the fall crop, colonies within reach of lowland areas have secured some surplus, but others will have barely enough for winter stores.

Market: Honey seems to be moving fairly well during the last two weeks but prices are not what they ought to be. Perhaps if producers will not be in a hurry to dispose of the crop, a better return can be expected.

Miscellaneous: AFB in this county has been reduced in the last few years until there is very little remaining among the county's 200 beekeepers. This is a result of a very thorough inspection, the burning of all infected colonies and the elimination, as far as possible, of all cross-comb and box hives. Beekeepers here, with few exceptions, welcome inspection. They regard it as a service to which they are entitled and get "fussy" if the inspector doesn't show up. What Indiana and other states need is adequate appropriations for thorough inspection and the employment of a sufficient number of inspectors to cover the whole ground. If hog cholera and tuberculosis in cattle can be stamped out, why not AFB?—E. S. Miller, Valparaiso, Indiana.

NEW YORK, October 3.

Weather: On September 27, Ithaca and vicinity were recipients of .75 of an inch of rain—the first appreciable amount of precipitation that has occurred since August 4, according to local Weather Bureau records. It was the first time the gauges have measured more than half an inch rainfall for a 24-hour period since that date. The rainfall for this area since January 1 is 37 per cent below normal due to the exceptionally dry months of May, June, July and August, particularly May and August. Due to additional rainfall last week pastures are becoming green again.

Honey Crop: With rainfall for the all-important month of May only 54 per cent of the normal it is fairly simple to deduce that no bumper crop of clover was harvested here. The fact is that we extracted not one pound of clover honey, leaving on what little was gathered for stores to tide the bees over until the buckwheat flow in August. As the drouth continued we were glad this had been done for there was little bee pasturage during the interval, basswood, as usual, failing to yield. The buckwheat flow was somewhat erratic, with some yards having a fair surplus, others with little to be extracted. Reports from other sections indicate a very light crop of buckwheat honey for the state as a whole.

Honey Market: The small crop of buckwheat has resulted in substantial price increases over those of a year ago. This is highly desirable from the beekeepers' point of view since many received only three cents, and even less, per pound last year. Where a crop was secured producers are in no hurry to dispose of it, preferring to hold for a more orderly market.

Miscellaneous: After such a season we are thankful that little feeding was required to put colonies in condition for winter. Some yards required no feeding, others having only a few colonies too light. Even the one yard usually requiring much feeding has plenty of stores. Each colony is weighed to determine its condition with regard to stores and combs of honey are added where needed. This work has proceeded rapidly; 425 colonies were weighed during one day when full time was devoted to this method of checking. Packing is now under way and soon it will be time to start getting equipment ready for what we hope will prove to be a better season. With honey plants in their present poor condition it remains to be seen whether Nature can stage a successful come-back and help make that hope a reality.—W. L. Coggshall, Ithaca, N. Y.

ONTARIO, September 2.

Another month has passed since the last notes were sent in. In general, September was drier than usual with absence of frost, and October 1 gave us the first morning that tender vegetation was affected. While war has been going on for a little over a month, generally speaking, there has been little change in the trend of events here in Ontario and all of Canada for that matter.

Local Honey Sales Good: Honey sales for September were much larger than for August. We have not raised prices. People calling at our place have taken about 15,000 pounds of honey, in most cases bringing containers and taking 50 pounds or more. As we have no honey stand and do not solicit trade in any way, this is, I think quite a lot of honey to be moved direct from producer to consumer.

A sugar shortage for a few weeks after war was declared, no doubt accelerated sales of honey, and, on the other hand, it was a ruinous factor in so far as fruit sales were concerned, as fruit, unlike honey will not wait. But even if sugar was scarce for a while, owing to the policy of the Food Control Board, prices have not been advanced. We have just purchased what we will need for feeding and I notice that the invoice is for exactly the same price we paid for sugar six months or so ago. On the other hand, a good friend in Alabama writes me that sugar prices in his state have already gone up $1.60 per hundred pounds. But we still have a cent a pound tax on sugar as a relic of the late war, so possibly the price of sugar is still lower in the United States than here in Canada. It looks as though the Price Control Board here in Canada means business, and if this control is exercised in a fair and impartial manner, no fair-minded person should object, as usually in so-called profiteering the people who can least afford it are called upon to bear the major part of the burden.

We have just recently returned from a short trip to the Niagara peninsula in the heart of the fruit belt, and we came home realizing that after all the beekeepers are not the only producers who are suffering from low prices caused by over-production or under-consumption, (one means the same as the other to the producer.) Such an abundance of fruit wasting was really a sad sight when we realize that millions of people are lacking the necessities of life. An eleven-quart basket of the finest peaches could be bought for 25 cents and the damaged stock was rotting even when offered for nothing.

Market: Export of honey to Great Britain is held up for the time being and it is necessary to get permits from the British Government before sales can be negotiated. As I have just recently received inquiries from exporters of honey or quotations, I surmise that the movement of honey overseas will soon be feasible.

Beeswax is firm in price and if war continues I predict that is will make a rapid advance as so much is used in the treatment of leather.

Miscellaneous: We are just starting to feed colonies short of winter stores, and have to date given only one or two apiaries an examination to ascertain what feeding is necessary. It appears that brood nests are heavier than they were a year ago at this time. We will have about 25% of our colonies wintering with the so-called food chambers this season and that will materially cut down our feeding bill, which even then will be heavy enough following a rather light honey crop.

In speaking of honey prices I forgot to say that prices for buckwheat are at least a cent a pound more than last year and ours has moved as fast as extracted, the honey being taken by a Jewish purchaser who tells us that his compatriots are using the buckwheat honey largely in place of sugar for baking purposes, as they were unable to get sugar for a few weeks past.

In the last issue I stated that a drug firm was getting me data on methyl bromide mentioned in a recent issue of Gleanings by a California contributor. I am sorry to say that the prices quoted are positively prohibitive for treating combs in a large building. Our building is about 25′ by 50′ by 10′, giving an area of over 12,000 square feet. At prices quoted for the bromide it would cost over $100.00 for one treatment. So until we get better prices for substitutes we will continue using the Cyanogas. True, it is a deadly gas but used with care it does the work very efficiently indeed. With a properly constructed mask there should be little danger if proper care is exercised. Some have inquired the price of such a mask and I am sorry to say that it is high enough. The one we use cost $22.00 and each year a renewed canister costs $3.00, I believe. It is manufactured by a firm that has factories in Canada and the U. S. Possibly it may be cheaper in the United States.—J. L. Byer, Markham, Ontario.

Heads of Grain from Different Fields

A Back-lotter's Idea

Before I started to pack bees I had about 50 per cent loss. At first I put burlap over the top but the bees would gnaw through, bring down all the shavings and carry them out through the entrance. I decided to stop that. I made a tray 6 inches deep, made a shoulder ⅜ inch on the inside to tack the screen to, then the bees can glue the tray to the hive without any trouble. I fill the tray with pine shavings to absorb the moisture and raise the inner cover about ⅛ inch, put the outer cover on, reduce the entrance, then put on the packing cases with 4 inches of leaves or straw. They start brood rearing earlier and when unpacked there are surely lots of bees. There are never any mouldy combs, no ice in the entrance, no partly frozen packing and I would say it is no-draft ventilation and the colony heat is not lost. There are very few dead bees and when a warm day comes the bees have a flight and carry their dead out in a short time. This is the third winter I have used this method and since packing this way I have not lost a colony yet.—J. S. Harris, Moline, Illinois.

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Some Colonies Produced 200 Pounds Surplus

I am sending you two photos, one of my 105 colony yard, and the other of me looking for queen cells. Some of my colonies have produced 200 pounds up to now (July 27, 1939) and honey is still coming in from sweet clover. We had a good basswood flow.—Robert Kroschel, Norwood Park, Ill.

Was it Just a Coincidence?

Bee men know that when a bee stings, other bees being aroused by the odor of the poison, may then and there, try to sting about the same spot. I wonder how long after a sting will the odor of the poison remain sufficient for bees to detect it. Can they detect the spot a week later? Having received one sting on my wrist for three weeks in succession, each one being on or near the same spot, and not receiving any other stings at any of these times, which were seven days apart, makes me wonder if it may be possible for the bees to detect where the previous sting was. Or is it just a coincidence? —B. P. Sieber, Belle Ellen, Alabama.

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Attention Fishermen!

A new beekeeping industry was born at Clemson College, S. C., Aug. 23, when T. P. Gaskins, president of the South Carolina State Beekeepers' Association, made a talk on selling drone brood for fishing purposes. In the past this subject has been laughed at, but after hearing Mr. Gaskins, those present decided it was no longer a laughing matter. It can be made a profitable sideline of beekeeping. In the past twelve months Mr. Gaskins has sold over $250.00 of drone brood. He says it is no trouble to get $1.00 for a frame of drone brood, if the buyer has the fishing fever.—A. V. Dowling, Valdosta, Ga.

This May Mean Nothing

In the October issue, page 623, C. H. Pease asks the question: "Has anyone been stung by a mated queen?" Recently, in examining a colony of common black bees, the writer thinks that he was, but cannot furnish absolute proof. The colony was being requeened but after going over the frames twice in search of the old queen, he finally resorted to shaking the bees in front of the entrance. Eventually, she was spotted crawling rapidly over the moving mass. Picking her up, the writer immediately received such a vicious sting that in his surprise and pain, he forgot to hold on and the culprit escaped. Further search was without avail. All stages of brood were present, but no queen cells, the honey flow being nil and well beyond the swarming season. This black queen was especially small. Was she a virgin? I don't know but I think not.—V. G. Milum, Apiculturist, University of Illinois.

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A Neat Back-lot Apiary

When the bee inspector was here, he gave me the idea to take pictures of my glass observation hive. He said he had not seen anything like this before, although you may have. I have changed these bees from the glass into wooden hives for winter, to give them more room to store honey for their winter supply. Many people have enjoyed watching these bees work and I have enjoyed the opportunity to study them in action. My first interest in bees came from a bee tree in front of the house, where bees have been working for several years. So last year we decided to get a hive for a swarm from this tree, then destroy the others. We lost the first swarm, but some one gave me a swarm so I could use my hive. It was but a few days until a second swarm came from the tree, and I got another hive. I continued to get a hive for each swarm as I did not then know about uniting them, so now I have six hives.—N. G. Boulos, Auburn, Indiana.

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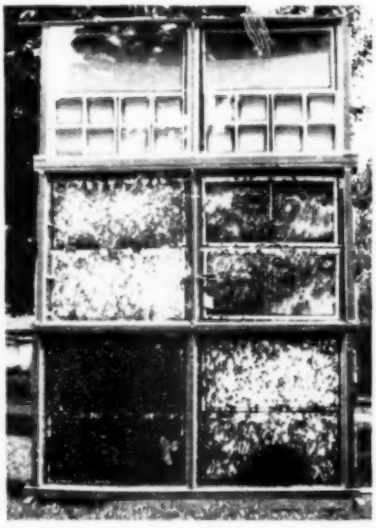
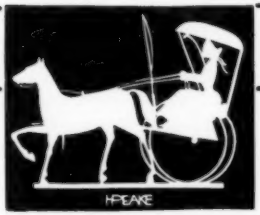
Bees Work on Ragweed and Timothy

In Asked and Answered, October 1939 Gleanings, I will have to disagree with the answer which mentions bees as not visiting ragweed nor timothy. We have had bees work these plants profusely in some seasons for pollen and store as much from them as from any other plant. However, some seasons they work them sparsely.—Alfred P. Johnson, Rankin, Ills.

Mr. N. G. Boulos, of Auburn, Indiana, keeps a few colonies in his back yard. His observation hive has given himself and his friends many hours of entertainment.



Spinster  Jane Says:

The hills are glorious, these autumn days, the trees seeming more colorful than ever before, in their new autumn styles and colors. Styles for trees? Of course! The Master Designer who planned all is surely a lover of beauty. His styles are inimitable, and why should we not love beauty too? Why not dress in lovely colors, rather than in drab dark, unlovely, depressing colors! Our clothes do influence our spirits, and being a born optimist, I must ban sad colors.

By Nature, We Are Beauty Lovers

So much is said and written against the use of cosmetics. I ask you, isn't it simply natural for gay young things,—yes, and gay old ones as well,—to at least try to make themselves a bit better looking? The world isn't going to wrack and ruin because of this. This wise old world is just using its brains a bit, perhaps being less prim and sedate, leaving the time-worn rut of convention, and in the wrench of turning out of that deep rut, being thrown a little off balance, yet really being frank and honest about it all. There may be too big a swing from the road, but this will soon be righted when things settle down to normal again, and we get the right focus on life.

With humans it is "the female of the species" only, who—they say—tries to make herself attractive. "They Say" cannot be depended upon. Stylists have been trying hard to get these sober males to adopt brighter colors. They are slow to accept anything so far out of the ordinary, BUT, some get permanents, some use gooey substances to take out natural curl, most use powder, lotions, and perfumes. Yes, I agree with "Sandy Fraser," who said, "Vanity is the last thing that dies, even in a man."

And in nature it is the male birds that wear brighter plumage, that strut, and preen, simply to attract attention.

In the honeybees' garb, there isn't much brightness, but there is soft, subdued richness in coloring. This is a protective measure, merely. Bright-hued bees would be too quickly snapped up by the birds and wandering fowl.

The color in autumn makes up in a measure for the loss of the music of our song-birds and bees. Oh shucks! Autumn beauty always does set us moralizing, and we will inevitably suffer a second attack in spring again.

Honeybees Set Humans a Good Example

We are really too busy garnering in our winter stores to miss the bees hum and busy "zooming". They have long beaten us in conservation of stores. In fact they never put things off, but set us a wonderful example in this, as well as in thrift. Every available bit of space in the hive is filled, if there is nectar to be found, near or far. No dole or relief for the bees unless it is a clear case of famine or drouth. If food is to be had, they conserve it, never stopping if the weather allows it. With no apology, Oh Solomon, there's wisdom even greater than your famous "ant" advice in saying, "Go to the honeybee, thou sluggard. Consider her ways, and be wise enough to copy her."

Next summer I hope to live every minute amid the humming and busy zooming of bees, once again, because Honey Boy is coming home, and, oh joy! an old-time apiary will once more be ours. I expect he will be bringing home those domesticated maverick swarms he hunted for and found. I'm wondering if they are the black fighting kind, or those gentle Italians that made good with us. My next-year's garden will depend a lot upon the disposition of those self-same bees, also its location. The "hit-and-run" variety means a far-away garden, and vice versa.

Great minds sometimes think as do small minds. I spoke of honey as a fine, economical substitute for sugar, and lo! some cartoonist brought home the same thought. He showed the little bees returning home, well-laden, and the busy housewife saying, "Five cups of honey take the place of seven cups of sugar." Am not just sure of the number, but the idea was plain and to the point.—Spinster Jane.

Michigan Inspection

Burning and Disinfecting Doubtful and Diseased Equipment is Just as Essential as Burning the Diseased Colonies

Don P. Barrett
Director Bureau Apiary Inspection Service

Beginning with the 1939 season the Michigan Apiary Inspection Service adopted a somewhat different policy than had heretofore been practiced.

Michigan has several counties located in heavily bee populated areas in which the eradication program has been outstanding. Judging from results obtained the past twelve years in these counties it was evident that a somewhat different system of inspection must be employed if we were to make the same headway on a state-wide basis. In counties referred to, actual inspection results bear out the records year after year. Further proof of the concrete results obtained is the fact that beekeepers of these counties know they can now operate apiaries without that dreaded fear of a serious outbreak of AFB.

One can readily see that ten and twelve years of thorough inspection service has changed the picture that one time faced these beekeepers. Why? Because the year 1927 found these counties, plainly speaking, rotten throughout with thirty, forty, and yes, even fifty percent infection. Today these same counties are practically clean with less than one percent infection.

A careful check and study was made of the two outstanding counties of this group in which the percentage of AFB is now less than a fraction of one per cent. We determined that the outstanding results were obtained by two factors, one being dependent on the other. First, ample funds were appropriated for inspection in both counties which insured complete or nearly complete annual inspection; second, thorough inspection was made.

Inasmuch as adequate funds are necessary to the success of any disease eradication program, I shall not go into that factor at this writing. However, I would like to give you my conception of what constitutes thorough inspection. It is my belief that thorough inspection is absolutely essential to the successful eradication of AFB from any county. Burning diseased colonies alone is not the answer; **locating and checking every piece of used equipment and if need be, sterilizing this equipment is just as important.** Unless the inspector is sure that used equipment found in a diseased area has never been on diseased colonies or mixed up in the various ways with other diseased equipment, it should be sterilized. Of course, in apiaries with clean records or those which have been clean for a number of previous years or even apiaries where there is a mild infection that was properly handled by the beekeeper, it is not necessary to disinfect or cause to be disinfected all the equipment. What I refer to

James L. DeKorne

Don P. Barrett

Jay Cowing

Complete clean-up of hives and surplus equipment of one of Michigan's badly infected apiaries, the owner of which fought Michigan's burning program and yet under his method of shaking bees, his apiary was found to be 50% infected. There were two buildings full of diseased equipment, one of which was crammed full of AFB brood chambers, an accumulation of several years.

mainly is not equipment of this nature or the equipment that is above the colonies, but the old used equipment stored away in buildings, sheds, attics, basements, and graineries adjacent to diseased apiaries and especially equipment used by beekeepers who have gone out of business and whose bees may have died of AFB.

This brings out the necessity for the department's furnishing the inspectors with a rather complete list relative to the apiary's history. If an inspector in working a county simply burns all diseased colonies together with the equipment that is on the bees, he is only half doing his work. He must locate the diseased equipment stored away, for if such equipment is not burned and disinfected it is only a matter of time before it is sold, given away and scattered throughout no telling how much territory to again cause new outbreaks of AFB.

When instructing our field men, we have stressed the importance of locating all apiaries together with the careful checking of each colony which requires a thorough inspection of every brood comb; and last and of equal importance of locating and sterilizing by fire all doubtful and diseased equipment. In so doing, we believe our inspection force has a better conception of what constitutes a thorough job.

In conclusion let me repeat that the aim of the Bureau of Apiary Inspection Service in Michigan is not to see how many colonies we can inspect or how much territory we can cover, but to see how thorough we can do the work in the area which we complete.

[Note: Most of us, after temporizing and experimenting with AFB for a period of years, finally come to the place where we are ready and willing to Cyanogas diseased colonies the day AFB is found and to burn combs of brood and honey from the diseased colonies in a deep pit, then covering the ashes thoroughly. Unfortunately, it took the Editor almost fifteen years to finally adopt this method of dealing with AFB, which, to some, may seem rather drastic, but is, in our opinion, the safest and most economical in the end. If beekeepers over the country would adopt the policy of destroying AFB colonies and combs the day they are found, also of thoroughly disinfecting good usable bee equipment that has come in contact with diseased colonies, our disease eradication program would go ahead by leaps and bounds. —Editor.]

The owner of this abandoned apiary, a commercial producer, felt the State Apiary Inspection Service should confine its efforts to the small beekeeper allowing the commercial producer to go uninspected.

Talks to Beekeepers

M. J. DEYELL

Away from It All

I believe there is a book published recently bearing the above title, which expresses the feeling I had last August when our family took a motor trip through the New England states and Eastern Canada.

Before leaving home I promised myself and family that I would forget bees and honey during our vacation. It did seem good to get away from the daily grind of business for ten days. However, I couldn't quite forget the bees. Strange as it may seem, we saw only three small apiaries in traveling through ten states. Of course I was busy at the wheel and perhaps missed seeing some hives which the other members of the family may have seen, but kept silent.

Hurrah for Quebec

After crossing the line between Vermont and Quebec (on Rt. 7), going north, large and small apiaries appeared on well-kept Canadian farms. As we neared Montreal we noticed a number of attractive roadside honey stands with signs, "Pur miel". How I did want to stop to visit with those French beekeepers and to look inside the hives! The buckwheat honey flow was on. We could almost smell the honey. But I remained true to my promise (even though my wife would have permitted me to stop) and drove on.

Our Per Capita Consumption of Honey is Low

According to the best statistics available the annual per capita consumption of honey in Canada, based on production, is about 3 pounds while in the U. S. A. it is about 1½ pounds. In New Zealand the per capita consumption of honey is between four and five pounds a year.

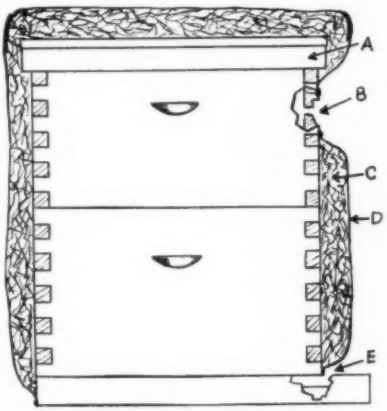
The higher per capita honey consumption in Canada may account, in part at least, for the larger number of hives seen there, as compared with this country.

It would seem then, that in this country the beekeeping industry needs more bees, more beekeepers, more honey and a wider publicity on the virtues of honey as a food.

A Few More Things About Wintering

I suggest that our readers study carefully the article on Wintering, page 672, by E. R. Root. There is still much to learn about wintering bees in the North. Some of us may have to unlearn some things we think we may have learned. I think it is wise for beekeepers who are, and have been successful in wintering bees to stick to their present method, rather than make any radical changes.

The facts are that very populous double-story colonies abundantly supplied with well-ripened honey and pollen and given adequate protection from winter winds can stand a lot of cold weather.



This illustrates a method of wrapping a hive in building paper with dry leaves or coarse planer shavings placed between the paper and the hive. (A) shows hive cover, (B) ⅝" hole in front of upper brood chamber, (C) dry leaves or shavings, (D) building paper, and (E) small bottom entrance, about 1½" x ⅜" to exclude mice. The cut-aways opposite B and E are made in the drawing to show the upper and bottom entrances. The paper in front of the top entrance is tacked close up to and around the auger hole. The method appears to be better than attempting to run a tube through the ⅝" hole and out through the packing.

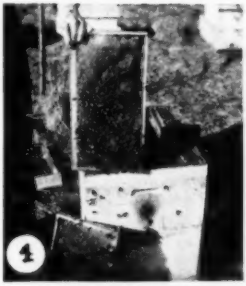
Fed 2000 Pails of Syrup in 1922

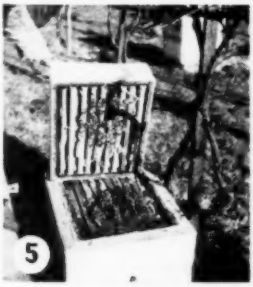
I can well remember the fall of 1922, just seventeen years ago, when we fed 2000 pails of syrup to our 1200 colonies of bees. In those days we wintered in single-story hives and fed syrup to supplement the lack of natural stores. Just think of the cost of the sugar and the labor involved in feeding the bees. At present we save all this expense by leaving a full super of honey, a food chamber, on each colony, this in addition to what honey there may be in the brood chamber. And what rousing colonies we find in the spring!

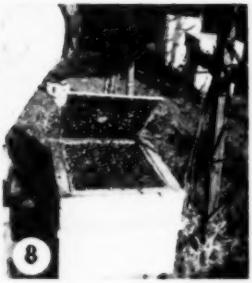
We Now Use Food Chambers

Last spring, March 2, to be exact, Mr. E. R. Root and I went to three of our

(Continued on page 712)







This shows ten of the twenty-two-story colonies we opened on on March 2, 1939. Note that colonies 1, 2, 3, 4 and 10 occupy single-wall hives. Colonies 5, 6 and 9 are in Buckeye or double-walled hives with shallow supers used as food chambers which were unprotected. Hives 7 and 8 are double walled throughout. There was little, if any, difference in the strength of the colonies. Note the food chamber of colonies 5, 9 and 10, are lifted up at one end to show the strength of the colonies. Note in hive 1, the small 1½" x ⅜" main entrance, also the ⅝" auger hole in upper brood chamber. All of the hives, except two, have a small ⅝" hole in front of upper story. Allen Latham, on page 687, this issue, tells how his bees smothered because the entrances were clogged with ice. If he had had top entrances the result might have been different. The small middle entrance not only allows moisture to escape but it prevents suffocation of bees.

Hives 1, 2 and 3 had the queen excluders left on under the cover during the winter. This saves taking them off in the fall and putting them back on again in the spring.

"WE CAN WIN THROUGH COOPERATION"

Program of National Beekeeping Conferences, Sacramento, Calif., Nov. 7-10

Tuesday, November 7, 1939
AMERICAN HONEY PRODUCERS' LEAGUE
Geo. W. Bohne, Presiding

8:00 to 9:30, Registration—The Native Sons Hall, 924 Eleventh Street; Get-acquainted Hour.

9:30—Convention called to order by T. C. Burleson, Vice-president. Introduction of the Presiding Officer.; Invocation. Addresses of Welcome: The Mayor of Sacramento, Tom B. Monks; Sacramento County Executive, Chas. Deterding; The Director of Agriculture, W. B. Parker. Response, Geo. W. Bohne.

10:00—President's Address, Geo. W. Bohne.

10:15—Report of the Secretary-Treasurer, Cary W. Hartman. Appointment of Committees, Committee Announcements. Introduction of Out-of-State Delegates.

10:45—The Beekeeping Industry and Its Needs, E. Guy LeStourgeon, Editor, Beekeepers' Item.

11:15—The Influence of Warehousing on Honey Marketing — Wendell Shore, Hamilton & Co., Los Angeles, Calif.

11:45—Announcements.

Noon Recess—Scheduled Luncheons American Honey Institute Directors, Hotel Senator; American Honey Producers' League Directors, Hotel Senator; Apiary Inspectors of America, Wilson's; California Honey Promotion Committee, Wilson's; Ladies' Auxiliary Tea, Wilson's.

2:00—Why Honey is Selling at the Present Levels—Harold J. Clay, Marketing Service, U. S. D. A., Washington, D. C.

2:30—Some Fundamental Principals in Selling Honey—T. W. Burleson, Waxahachie, Texas.

2:50—The Honey Channels of Trade—D. B. Bradshaw, Bradshaw & Sons, Wendell, Idaho.

3:15—Subject to be announced—Geo. P. Walton, Carbohydrate Research Division, Washington, D. C.

3:40—Nectar Concentration of Honey Plants —Geo. H. Vansell, Pacific Coast Bee Culture Field Station, Davis, California.

4:00—Committee Reports and Announcements. Suggested Sight-seeing Tours.

5:30—California Apiary Inspectors' Dinner, Wilson's.

8:00—Evening Session—The Native Sons' Hall, 924 Eleventh Street.

Open to the Public

Speakers: Jas. I. Hambleton, Director, U. S. Bee Culture Laboratory, Washington, D. C. Subject—The Position of the Honeybee in Relation to Our General Welfare. E. R. Root, Editor, Gleanings in Bee Culture, Medina, Ohio. Subject—Honey as a Food and a Medicine. Demonstration in Handling Live Bees—J. E. Eckert, University of California, Davis, California. Music. Free Samples of Honey.

Wednesday, November 8, 1939
AMERICAN HONEY INSTITUTE
M. S. Stone, Presiding

8:00—Ladies' Auxiliary Breakfast, Wilson's.

8:00 to 9:30, Registration—The Native Sons' Hall. Get-acquainted Hour.

9:30—Convention called to order by C. E. Lush. Introduction of the Presiding Officer. President's Address, M. S. Stone. Report of Secretary-Treasurer, M. J. Deyell.

10:00—The Organization, Management and Future Possibilities of the American Honey Institute, Lewis W. Parks, G. B. Lewis Company, Watertown, Wisc.

10:15—The Work of the American Honey Institute, Mrs. Harriett M. Grace, Institute Director, Madison, Wisconsin.

10:45—The California Honey Promotion Committee, C. E. Lush, Chairman, Orange, California.

11:15—Personal Impressions of Recent Changes in Beekeeping Practice—E. R. Root, Editor, Gleanings in Bee Culture, Medina, Ohio.

11:45—Committee Reports and Announcements.

Noon Recess—Scheduled Luncheons Queen and Package Bee Producers, Wilson's.

2:00—One Thousand Ideas, or the Answer to the "Honey Blues". Geo. "B." Wright, San Diego, California.

2:20—General Symposium of Honey Marketing Problems—Talks limited to 5 minutes for each speaker.

3:00—The Work of the Bee Culture Laboratory, Jas. I. Hambleton.

3:15—Federal Aid in the Eradication of Bee Diseases, C. U. Duckworth, State Department of Agriculture, Sacramento, California.

3:45—Pollen in Relation to Hive Economy, Frank E. Todd, Pacific Coast Bee Culture Field Station, Davis, Calif.

4:00—Committee Announcements.

6:30—Annual Banquet, Music, Entertainment —Hotel Senator.

Thursday, November 9, 1939
GENERAL SESSION
Harry Hill, Presiding
President, California State Beekeepers' Association

8:00 to 9:30, Registration—The Native Sons' Hall. Get-acquainted Hour.

9:30—Convention called to order—Harry K. Hill, Willows, California.
Committte Reports and Announcements.

9:45—The Ladies' Auxiliary, Mrs. Irene W. Duax, National President, Chicago, Illinois.

10:15—Greetings from Canada—A. W. Finlay, Provincial Apiarist of British Columbia.

10:30—Some Beekeeping Problems in Oregon —H. A. Scullen, Oregon Agricultural College, Corvallis, Oregon.

10:45—The Sioux Honey Association—Edward G. Brown, Seargent's Bluff, Iowa.

11:00—The Declining Practice of Comb Honey Production—Carl E. Killion, State Apiary Inspector, Illinois.

11:15—S. A. Jones, Marketing News Service, Washington, D. C.

11:40—Reports of Committees.

Noon Recess—Scheduled Luncheons The California Ladies' Auxiliary (All ladies invited to attend), Wilson's.

2:00—Subject to be announced, G. H. Cale, American Bee Journal, Hamilton, Ills.

2:20—Symposium on the Supersedure of Queens—Talks limited to 3 minutes by queen breeders and honey producers.

3:20—Committee Reports.

4:00—Announcements.

8:00—River Lines Delta Queen or Delta King sail for San Francisco and Treasure Island.

Friday, November 10, 1939
TREASURE ISLAND

10:00 a. m.—Assembly, Agricultural Hall Auditorium.

Address of welcome by Dr. Geo. H. Hecke, Administrator, Agricultural Exhibit.

Special announcements concerning exhibits you will want to see.

American Honey Institute News Notes

The American Honey Institute will publish a list of Who's Who in the American Beekeeping and Honey Industry. Those who send their investment of one dollar or more to the American Honey Institute during 1939 will have their names on this list. Please state whether you desire your name listed under producers, queen breeders, honey packers, specialists, state inspector or other heading. This list will have a wide circulation.

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The American Honey Institute is very pleased that so many like the new window streamers and Honey Cooky folder. A day or two after samples were mailed, many rush orders were received by mail and telegraph for lots of 500 and 1000. Every beekeeper should have at least one dozen to distribute to stores in his community. Regardless of how **small** or **large** your order, the American Honey Institute is pleased to fill it the day it is received.

The streamers can be used the year round. The president of an internationally known business concern writes, "The window streamers are perfect and the colors are just right."

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The Honey Cooky leaflet is in great demand. Orders ranging from half a dozen to 1000 and more have been received. We have been asked to quote prices on 5 and 10 thousand lots. (This item is being written five days after samples were put in the mail.) Why not enclose a leaflet in a letter to your customers?

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Printers have warned us that the price of paper may be higher. Do place your orders while the old prices are in effect.

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Did you receive a copy of Institute Inklings? If not, please let us know. We want every beekeeper to receive it.

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Among visitors this month were Mr. Herman Kind of Fleischman's Yeast and Miss Caroline Dexter of Practical Home Economics, New York City, and Mr. D. H. Chambers and son of Circleville, Ohio.

The daily requests for honey recipes from every state in the union is growing each day. The Institute has furnished hundreds of dollars' worth of free literature in answering these requests this year.

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One of the coaches in the Big Ten told an Institute representative who talked to him that athletes all over the country are recognizing the value of honey in the diet. The Department of Economic Entomology at this University furnished a supply of honey gratis to the athletic department.

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The Department of Health, Albany, New York, is preparing a pamphlet entitled, "Sugarless Days" in which the Institute's "100 Honey Helpings" will be mentioned as a reference.

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"The Sweetest Story Program" a program of inspirational poetry, organ music, and honey recipes is given over station KLS, Piedmont, California, from 10:30 to 10:45 Friday mornings.

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Two more well-known Honey concerns have placed orders for 100 Honey Helpings with the back cover imprinted. The Institute will be pleased to give you suggestions for your copy of imprinting.

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The American Honey Institute had the honor and pleasure of a visit from Mr. Newell E. France of Platteville, Wisconsin. Mr. and Mrs. France were in Madison to celebrate 59 years of marriage. Mr. France formerly was State Bee Inspector of Wisconsin for more than 25 years.

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Do you talk honey every day? Just recently a man who does talk honey visited his fraternity after a football game. When he returned to his home he ordered honey to be sent to these college students and sent a dripless honey container for each table.

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Some of the hearty cooperation that the Institute received for National Honey Week came from the Directors of the various State Departments of Markets.

TALKS TO BEEKEEPERS

(Continued from page 708)

apiaries and opened twenty hives at random. The pictures on page 709 show what we found.

I well remember the first season we used the food chamber. It was in 1924. We tried it on 32 colonies. Some of our men intimated that these colonies would be dead the following spring but lo and behold, these colonies were among the strongest colonies we had.

It has been said that the proper use of the food chamber is the key that unlocks the door to successful beekeeping.

Large Hive Contains More Pollen

Not only does the double-story brood chamber, under normal conditions, contain an adequate supply of honey but it is likely to contain more pollen than a single-story standard brood chamber. Pollen is very essential for brood rearing which, even in the North, begins on a small scale in January and increases during the late winter and early spring months. Normal colonies with an abundance of pollen as well as honey build up in ample time to take advantage of the early honey flows. Colonies short on pollen do not develop normally during spring months and consequently may fail to store the maximum honey crop.

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FLEMINGTON FAIR HONEY EXHIBIT

Elmer G. Carr

In several counties in New Jersey are staged agricultural Fairs in late summer and early autumn. But one, however, at present offers inducement in the way of premiums, for honey exhibit to encourage bee men to make displays. This one is the Flemington Fair which was held this year August 29 to September 4.

There were competitive exhibits of light and dark extracted honey, comb honey and beeswax. Also individual displays and county competitive displays.

The awards were as follows:

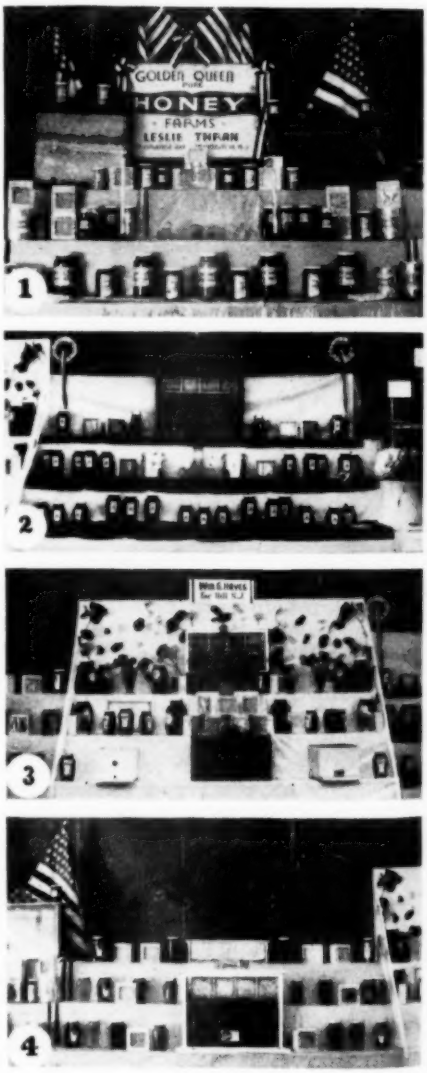
Section honey: 1st, Wm. G. Hayes, Far Hills; 2nd, Chas. Holcombe, Lambertville; 3rd, Mrs. Helen Hayes, Far Hills. Light extracted: 1st, Mrs. Helen Hayes; 2nd, Harry N. Conner, Stockton; 3rd, H. W. Carkhuff, Metuchen. Dark extracted: 1st, Wm. G. Hayes; 2nd, Mrs. Helen Hayes; 3rd, Harry N. Conner. Beeswax: 1st, Harry N. Conner; 2nd, Leslie Thran, Irvington; 3rd, Wm. G. Hayes. County exhibit: 1st, Hunterdon; 2nd, Middlesex. General exhibit: 1st, Leslie Thran; 2nd, Wm. G. Hayes.

Someone was in attendance constantly to explain the exhibits and present the value of honey as a food.

A live-bee demonstration with lecture was given daily in a cage. This attracted much attention.

Some weird notions regarding bees were presented by visitors. An effort was made by attendants to correct false notions regarding bees.

Pennington, N. J.



Exhibits at the Flemington, N. J. Fair—(1), Leslie Thran; (2), E. G. Carr; (3), Wm. G. Hayes; (4), Hunterdon County exhibit.

Sacramento's Leading Hotels

J. E. Eckert
Associate Apiculturist

The map shows the location of the hotels in Sacramento together with the prices that are to be guaranteed for the period of the convention. Besides these hotel rooms there are numerous tourist lodges or hotels in the near vicinity of Sacramento for those who drive to the convention and desire such accommodations, which are as good as one will find anywhere in the West.

The meetings will be held in the Hotel Senator, Masonic Temple or Elks Temple, the last being the probable choice. All are centrally located with regard to the hotels and down town section of Sacramento.

HOTEL	SINGLE Shower	SINGLE Tub	SINGLE Without	DOUBLE Shower	DOUBLE Tub	DOUBLE Without	DOUBLE TWINS
Berry—8th & L	$2-2.50	$2.50-3		$3-3.50	$3.50-4		$4-4.50
Californian—8th & I	$2.50-3	$3-3.50		$3-3.50	$3.50-4		$4-5.00
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Land—10th & K	$2.50	$2.50-3	$1.50-2	$3.00	$3-4.00	$2-2.50	$4-5.00
Lenhart—1121 9th St.	$2-3.00	$2-3.00	$1.50-2	$2.50-3	$3-4.00	$2-2.50	$4-5.00
Regis—11th & K		$2.00	$1.25		$2.50	$2.00	
Sacramento—10th & K	$2.50	$2.50-3.50		$3.50	$3.50-5		$4.50-7
Senator—12th & L	$3.00	$3.00-5		$5.00	$4.50-6		$5.00-8
Sequoia—911 K St.		$2.50	$1.50		$3.00	$2.50	
Travelers—5th & J	$2-3.00	$2-3.00	$1.50-2.50	$3-4.00	$3-6.00	$2-3.00	$5-6.00

Asked and Answered

Wintering Bees in a Building

Question.—Would it be advisable to place some hives of bees in an old empty chicken house late this fall to get them out of the cold winter winds?—John P. West, N. Y.

Answer.—No. During warm spells in winter the bees would leave the hives and fly out doors through small crevices in the walls and being unable to find their way back into their hives they would perish. It would be preferable to winter the bees outdoors in some spot sheltered from the wind, the hives being packed with building paper and forest leaves placed between the paper and hives, leaving a tunnel from the entrance to the side for the bees to get out. See page 708, this issue for illustrations of a colony packed with paper.

Price of Royal Jelly

Question.—We have been asked by a physician to supply him with some royal jelly for some experimental purposes. We are at a loss to know what this substance is worth, as he wants to pay for it. What would the price be, if any has been sold before, or, if not, what would be your estimate as to its worth?—Clarence Wheal, Penn.

Answer.—We supplied some royal jelly to a doctor in the East during the past two or three years, gratis. We do know that it means considerable in labor, as well as a drain on the life of the colony to secure a considerable amount of royal jelly. We presume that a price of so much per ounce could be established. The time is doubtless coming when there will be a demand for royal jelly. When this time does come, a price will have to be established. One southern shipper suggested $10.00 an ounce. That seems somewhat high. If we get further information we shall be glad to get in touch with you.

Introducing a Caucasian Queen to an Italian Colony

Question.—Can I combine or introduce a Caucasian queen with a colony of Italians? Will the Italians take to the different queen?—Ernest Freeman, N. Y.

Answer.—Yes, this is perfectly possible. The two races of bees, Italians and Caucasians, belong to the same species, *Apis mellifica*, and have characteristics that are common, although they are different in some respects.

Lack of Honey Below Excluder

Question.—Is there any way to make the bees carry honey in an upper hive-body down into the brood chamber below? I have placed a couple of food chambers with brood and lots of honey above an excluder with the queen and full sheets of foundation below. That was 3 weeks ago (this was written Aug. 13, 1939) and they have not taken any honey down. The queen has used all cells, laying two or three eggs in some of them.—Glen Bratley, Illinois.

Answer.—It seems probable that your colony with plenty of honey in the supers above a queen excluder will carry some of the honey down into the lower brood chamber containing the queen with frames containing full sheets of foundation. If there is a honey flow on, the bees should draw out the full sheets of foundation in the brood chamber. If there is no honey flow and the bees do not draw out the full sheets of foundation, it may be necessary for you to transfer some of the combs of honey in the supers above, down into the brood chamber below, for winter stores.

Combs Mold During Winter

Question.—My hives are on a platform 3 feet above ground, 4 miles from the ocean, 500 feet from the river, and are located on a hill in a shady spot. In the winter the inner walls and combs get moldy. Is there a way to check this?—J. John Kukene, Massachusetts.

Answer.—You are close to the ocean and without a doubt the atmosphere contains considerable moisture. It would be well for you to arrange a top or middle top entrance in each of your hives. If you winter in double brood chamber hives, you should bore a ⅝" hole in the top brood chamber, or food chamber. A hole bored in the hand hole would answer the purpose. This hole would permit excess moisture to leave the hive. If you pack your hives in tar paper, the packing may be drawn up close to the small hole so that the bees may use this upper entrance. Some beekeepers make a top entrance through the inner cover of each hive and have a tunnel to the outside to permit moisture-laden air to escape. When this is done, the main entrance should be reduced down to very small dimensions, about ⅜"x1½".

When to Take Off Filled Supers

Question.—I would like to know when filled supers of honey should be taken off, both extracting and comb honey, in western Pennsylvania. I have heard that late blossoms are not good honey plants?—Mathias Singer, Penn.

Answer.—Comb honey supers should not be removed until the sections are capped over. At the close of the honey flow it is sometimes difficult to get the rows of sections on the outside of the super thoroughly capped over. It is better to remove such supers, rather then permit the sections to become travel-stained. Supers containing extracting combs should be removed when the combs are approximately three-quarters capped over. It does no harm to leave them on a little longer, especially if the weather is

rainy. Hot weather tends to ripen honey quickly.

Drone-laying Queens

Question.—I have about 30 hives of bees in patent 10-frame hives. I find two of my hives produce only drones, no workers at all. I have kept them going by putting in some worker brood for two months or more. They each have a queen as I saw them. What is the trouble with the queens?—F. J. Stovall, Miss.

Answer.—It is probable that the two colonies in question have drone laying queens. These queens have doubtless lost their fertility and lay unfertile instead of fertile eggs. These unfertile eggs develop into drones. These queens should be removed and young laying queens put in. As a rule, old worthless queens are superseded by the bees and young laying queens appear in due time. In some instances, however, supersedure does not take place and it is necessary for the owner of the bees to remove the old queens and replace them with good queens. Due to the lateness of the season, also the fact that the two hives contain old bees, it may be preferable to unite these two colonies with normal colonies, after killing the old queens. You may be able to divide your united colonies in the spring in order to make up two new colonies to retain your original number of hives.

Killing Bees in the Fall and Using Packages in the Spring

Question.—I have been thinking of killing my bees off this fall and buying new packages in the spring about May 1, instead of packing them for winter, as packing cases and labor of packing and unpacking in the spring all take time and money. Besides it takes a good 80 pounds of honey to winter a hive of bees outside up here in order to be sure they have plenty. Now what is the best way to kill these bees, what with, and what time in the fall would you say to do the work? Should there be brood left in combs after the bees are killed and does the stuff you use to kill the bees hurt the honey that is left in the hive in any way?—Cyril R. Kelley, Wisconsin.

Answer.—Killing off colonies in the fall and installing packages of bees the following spring can be done, and some beekeepers in the far North are doing it. To kill bees you should use Cyanogas, a powerful chemical that destroys the bees instantly. One tablespoonful of this chemical is thrown into the entrance of the hive, and the bees are dead in less than a quarter of a minute. One commercial beekeeper in Northern Michigan dequeens all of his colonies early in August, in order that the queenless bees may store pollen, and also that the honey gathered after that time may be stored in the combs instead of being used for brood rearing. He places a queen excluder under each brood chamber, directly above the bottom board, to prevent the virgin queens, reared from cells, from going out to mate. Late in the fall, the hives, ready for packages next spring should be stored in a building that is bee proof and the hives should be made mouse proof. The combs should contain honey and some pollen, which are necessary for the quick development of the colony in the spring. Cyanogas does not make honey unfit for bees or humans. The gas soon passes off the combs.

Honey Too White for the Trade

Question.—I have two to three tons of extracted honey (ready) and to my surprise this white and sweet clover honey is pure water white just like comb honey. My grocer who takes my crop tells me he always had, and has some now, amber honey, and he will not take the white. We extract and strain through five thicknesses of cheesecloth, then put into a water bath and heat to 140° for half an hour and let stand in the honey tank for four days, but it is white and syrupy. How would it be to buy some amber honey and mix with it?—Dr. E. D. Russell, Iowa.

Answer.—We are interested in your letter saying that your extracted honey is too white for your market. This is quite unusual. The majority of people like white honey, although some like amber colored honey. It would be a simple matter for you to purchase some amber honey and mix it with your white honey, in order to have a slightly darker-colored honey. In our opinion, this would be a good thing to do, especially where white honey is not overly plentiful. If you mix the two kinds of honey while they are hot, stirring thoroughly, a good blend may be obtained.

Rearing One's Own Queens

Question.—In your book, the A B C and X Y Z of Bee Culture, it says that the best queen cells are raised during the swarming and supersedure period. I find the queens that are raised at such a time are inferior, that is, those that come after the honey flow. I would like, if it is possible, to raise queens during the honey flow, and in that way I could supply any colonies that would happen to lose their queens with strong, young ones.—Harry Mather, Illinois.

Answer.—Some beekeepers rear queens from cells taken from good colonies during the height of the season. One cell is placed in a nucleus. One can take an ordinary ten-frame hive and divide it into three or four parts by using tight-fitting division boards and inner covers to fit tightly over the compartments. Such a hive should have small entrances facing in different directions. When a queen cell is found, the comb containing the cell may be taken away, together with adhering bees and placed in one of the compartments. In due time the virgin will emerge and after about five days from emergence she will mate and after another five days will begin laying. Some requeen by removing the old queen and setting the comb with the queen and bees into the center of the brood chamber. This method is more likely to be successful during a honey flow than during a dearth of nectar.

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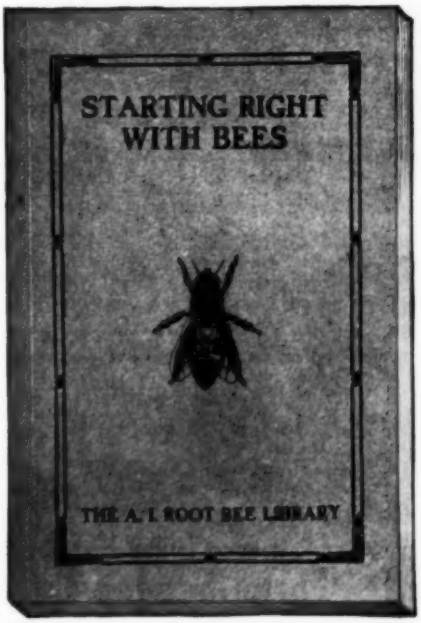

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CELLAR WINTERING

(Continued from page 671)

some kind. The colonies are sloped slightly forward so that in the advent of moisture it can readily drain out of the hive. They are piled from two to four colonies high depending on space available and size of hives being wintered. The entrance contractors are then immediately taken out and as soon as everything is shipshape the double doors leading into the cellar are carefully closed and all the ventilators opened wide. The ventilators are then left open until the weather demands closing, which might be a week or a month. The ceiling ventilator is then closed with three or four layers of burlap bags or any other suitable blanket. The tile inlet is left open unless later on the severity of the winter warrants its being closed for a time. When the weather "breaks" in the spring the ventilators are again opened wide and left until the bees are taken out which will be somewhere from the third week in March to the first week in April. They are taken out in the evening as soon as it is dark so that they will be quiet by morning and will begin flight gradually.

There are numerous "kinks" about cellar wintering that help make it easier or better. For example, some kind of canopy should be built over the upper ventilator to help avoid the entrance of any light when the ventilator is open. Light worries or at least disturbs bees especially toward spring, and absolute darkness is the thing desired. Light entering a cellar causes bees to rear brood, and we have always found that a colony that comes out strong but has no brood is always a better colony for the flow, and in this white clover and alsike territory the flow comes early. The brood, of course, does no harm, but it is rather the condition that caused the bees to begin rearing brood that is wrong.

Another thing that might help is to have the thermometer suspended on a string and lowered down through the upper ventilator or through a piece of eaves spout tubing so that the temperature can be looked at without any disturbance to the bees because the less the bees are disturbed during the winter the better.

Janesville, Minn.

• • •

JUST NEWS

(Continued from page 720)

tinued the active interest in her bees which began at Fruitdale, S. D., in 1915. In 1920 she sold her bees there when the family moved to Rapid City. However, the beekeeping urge proved unconquerable in this vital, energetic woman. She purchased 150 colonies which in a few years she built up to 400 colonies with her top season's production at 42,000 pounds of honey. At that time she was mentioned in press dispatches as being one of the country's highest producing woman beekeepers. A likable personality and fastidious tastes helped to develop for her a local trade which ordinarily took all the honey she could produce. She kept her bees in several yards located in the irrigated foothill valleys of the Black Hills.

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TUPELO HONEY—DELIGHTFULLY DIFFERENT. Send 10c for sample. State quantity wanted. J. M. Cutts & Sons, Rt. 1, Montgomery, Ala.

250 COLONIES, supers and equipment in good condition. Can furnish certificate of health. Harold E. Ault, Fort Collins, R. 1, Colo.

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Calling All Beekeepers!

Dear Beekeepers:

I wish it were possible to have a heart-to-heart talk with beekeepers over the country, also others affiliated with our industry.

During the past ten months it has been my good fortune, as chairman of the Finance Committee of the American Honey Institute, Madison, Wisc., to get a close-up of Institute activities and I must say I am thrilled with the wonderful work being done in popularizing honey. Mrs. Harriett M. Grace, manager of the Institute office is doing a marvelous piece of work.

Read the **Institute News Notes** appearing each month in the bee journals for information on various phases of Institute work. The Institute is not advertising any particular brand of honey but it is boosting honey and it is the only national organization that works continuously for the good of beekeepers.

The Institute doesn't operate without expense. It isn't under-written by millionaires. It has to have hard-earned dollars to pay expenses of office help, housing, heat, light, etc. There isn't a dollar wasted. It is running along on a very narrow margin, paying expenses each month and keeping out of the red.

It does need more money to enlarge the scope of honey publicity. If each beekeeper in the U. S. A. would give $1.00 for each ton of honey produced, the Institute would receive around $75,000.00 a year, whereas, at present it is operating on about $5,000.00 a year.

Think this matter over carefully. Talk the Institute among your friends. Send to the Institute office for "Institute Inklings" a quarterly publication, and, last, but not least, **mail your contribution today,** if you have not already done so.

Help yourself by helping the American Honey Institute.

Sincerely,
M. J. DEYELL

(This space donated to the Institute by Gleanings in Bee Culture)

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ALLEN LATHAM
Norwichtown, Conn.

WHEN WRITING TO ADVERTISERS, MENTION GLEANINGS

FRUIT CAKE MASTERPIECES

(Continued from page 681)

thoroughly on a towel before cutting. Boil prunes 10 minutes in water to cover; drain, dry and cut from pits into strips. Rinse raisins, drain, dry. It is important that fruits be well dried. Cut fruits into small pieces, leaving seedless raisins whole and cutting seeded ones into strips. Combine fruits, peels, spices, marmalade, fruit juice and honey. Stir well to blend. Cover and let stand over night. Cream butter, add sugar gradually, and cream until light and fluffy. Add the well-beaten eggs and beat. Add part of flour sifted with salt and soda. Mix. Add fruit mixture and nuts, stirring well. Add remaining flour and stir until fruit is well distributed. Pour into well-greased and lined tube pan. Bake in slow oven, 275 degrees F. for 3 hours. Increase heat to 300 degrees F. and bake 1½ hours. While still warm glaze with equal parts of honey and warm water. Makes about 8 pounds.

Ribbon Fruit Cake

Two and ½ cups sifted cake flour, 1 teaspoon baking powder, ¼ teaspoon soda, 1 teaspoon salt, 1 teaspoon cinnamon, ½ teaspoon nutmeg, ½ teaspoon alspice, ¼ teaspoon cloves, 2 cups seedless raisins, 2 cups currants, 1 cup finely cut citron, 1⅓ cups broken walnuts, 1 cup butter, 1⅓ cups honey, 6 egg yolks, unbeaten, and ½ cup coffee.

Sift flour, measure, and resift with baking powder, soda and salt and spices; sift three times. Dredge ½ cup of the flour mixture with the fruits and nuts. Cream butter well, add honey gradually, creaming until

(Continued on page 723)

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FRUIT CAKE MASTERPIECES

(Continued from page 722)

light and fluffy. Beat in egg yolks, one at a time, beating thoroughly after each addition. Add flour, alternately with coffee. Add fruit mixture and mix well.

For light part assemble: Two and ½ cups sifted cake flour, 1 teaspoon baking powder, 1 teaspoon salt, ⅛ teaspoon soda, ⅔ cup each of finely-cut citron, pineapple and candied cherries, 1 cup finely ground peanuts, ¾ cup shredded coconut, 2 teaspoons grated lemon rind, ¾ cup butter, ¾ cup honey,. 6 egg whites, unbeaten and 2 tablespoons lemon juice. Sift flour, measure, and resift three times with baking powder, salt, and soda. Reserve ½ cup flour mixture for dredging fruits and nuts. Cream butter, add lemon rind and honey gradually, creaming until light and fluffy. Add 3 egg whites, beating well after each. Stir in lemon juice. Add flour, alternately with remaining egg whites. Add dredged fruits and nuts, mixing well.

Grease two loaf pans 8 x 4 x 3, line with Manila paper, grease; add waxed paper lining and grease again lightly. Spread ¼ of dark mixture in each pan, cover each with ½ of light mixture, top each with ½ of remaining dark mixture. Brush with honey to glaze. Bake in slow oven, 250 degrees F. for about 4½ hours.

Aurora, Neb.

• • •

COMB HONEY, SUNSHINE, SHADE AND COLOR

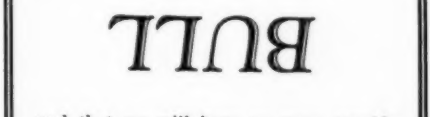
(Continued from page 678)

Well, such is life. I remember back in the 90's when the sugar people were publishing articles with the direct object of getting people to use white sugar—or granulated sugar as it was called—and now when the housewife wants raw sugar she has to pay a higher price to get it. Yes, and the same with wheat flour—the people had to be sold white flour, that had the bran and middlings removed, and now the bran, that was then supposed to be worthless, sells in packages as breakfast food, and at a price of several times that of the white refined flour.

As for me, I like bread made from wholewheat flour; I still think that Sea sugar has a better flavor than the granulated,—and I still prefer a first-class article of comb honey for hot biscuits.

El Centro, California.

Just received word from the North that the boys were "Shooting the Bull". They sent a picture along to prove it, so we are sure they have him on his back,



and that we will have no more trouble with him.

This reminds us that 1940 will soon be here and we must give more thought to

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